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JOURNAL 2018

A record of activities in 2017



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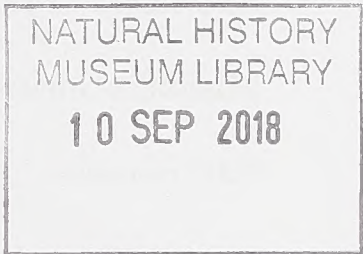


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Edinburgh Natural History Society

Council October 2017 - 18

Honorary President	Elizabeth Farquharson
President	Wilma Harper
Vice President	Sarah Adamson
Honorary Secretary	Vacancy
Honorary Treasurer	David Adamson



Ordinary Council Members

Erica Bright, Patrick Chaney, Cameron die Konigin, Fiona Maguire

Non-Council roles within the Society Excursion Committee

David Adamson, Lyn Blades, Neville Crowther, Wilma Harper, Jean Long

Indoor meeting organiser	Joanie McNaughton & Peter Leach
Website	Joanie McNaughton, Malcolm Lavery, Wilma Harper & Sarah Adamson
Facebook administration	Sarah Adamson, Wilma Harper, Pauline King
Twitter	Ptolemy McKinnon & Wilma Harper
Journal	Sarah Adamson & Peter Leach
A.V. support for indoor meetings	Peter Leach
Library & equipment	Pauline King

The aim of the Journal is to create a snapshot of the Edinburgh Natural History Society in 2017. Outdoor meetings are held throughout the year and indoor meetings are held monthly at 7.30 on a Wednesday from September to April at the Guide Hall, 33 Melville Street, Edinburgh, EH3 7JF.

Meetings are publicised by programme cards and on the website (edinburghnaturalhistorysociety.org.uk). All are welcome to the meetings.

Library

ENHS books and equipment are stored at The Wildlife Information Centre (TWIC) offices, Vogrie. Contact can be made with Pauline King by e-mail (paulinekhhome@msn.com).

Thanks to members who made contributions and helped to produce Journal 2018, especially Vladimir Krivtsov, Jean Long, Jackie Muscott and Sandra Stewart for proof-reading.

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Photographs by David Adamson, Sarah Adamson, Erica Bright, Steuart Ferguson, Wilma Harper, Pauline King, Peter Leach, Joanie McNaughton, Claire Reaney and Juliet Wilson

Edinburgh Natural History Society
Scottish Charitable Incorporated Organisation Number SC 004669
Contact: enquiries@edinburghnaturalhistorysociety.org.uk

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President's piece 2018

When I became President, one of the things I took custody of was a box of journals dating back to 1965. Browsing through them, they have become larger and glossier in recent years and the balance of articles has shifted from contributed pieces on a topic of interest to the current format dominated by excursion reports. Despite this change, there is a thread running throughout which characterises “the Nats” as a group of people sharing a common interest in natural history. Today that is a term which sometimes puzzles people but might be best described as the study of all aspects of the natural world through direct observation.

Looking through this Journal, as in previous years, we see that the Edinburgh Natural History Society offers members a full and varied programme of field visits, evening talks and occasional workshops. It is effective in promoting the understanding of a very broad spectrum of natural history. Moreover, members find participating in Nats events enjoyable and worthwhile. Our main aim is to explore the natural world where it happens and people are always willing to share their often very considerable knowledge. Citizen science is the jargon term of the moment. The Nats have been doing it for years.

What we do may not have changed, but how we do it does evolve. We now have a presence on Facebook and Twitter connecting us with a wider community with interests in common with ourselves. During the year, we have been working behind the scenes on a major upgrade to the website which will help both in promoting what we do and updating how we run the society. Looking back on 2017, the AGM in October marks the change in office bearers and I am grateful to the outgoing Council for all their work – President, Peter Leach; Secretary, Noeleen Donachie and Council members Ptolemy McKinnon and Ian Schoolar. I would also like to extend a welcome to the new Council Members: Erica Bright, Fiona Maguire, Cameron Die Konigin and Patrick Chaney. We depend on volunteers to take on various duties and it seems to be difficult to fill all roles. We currently have vacancies for Secretary and two Council Members, Talks Secretary and members of the Journal Team. Membership has been declining and is currently around 110. Although we are a very active society, we need to maintain member numbers and especially add members who will take an active part in Nats’ activities. Council will be focussing on increasing membership as a priority. However, we can’t do it alone so tell your friends, bring them along and encourage them to join us.

Wilma Harper

President

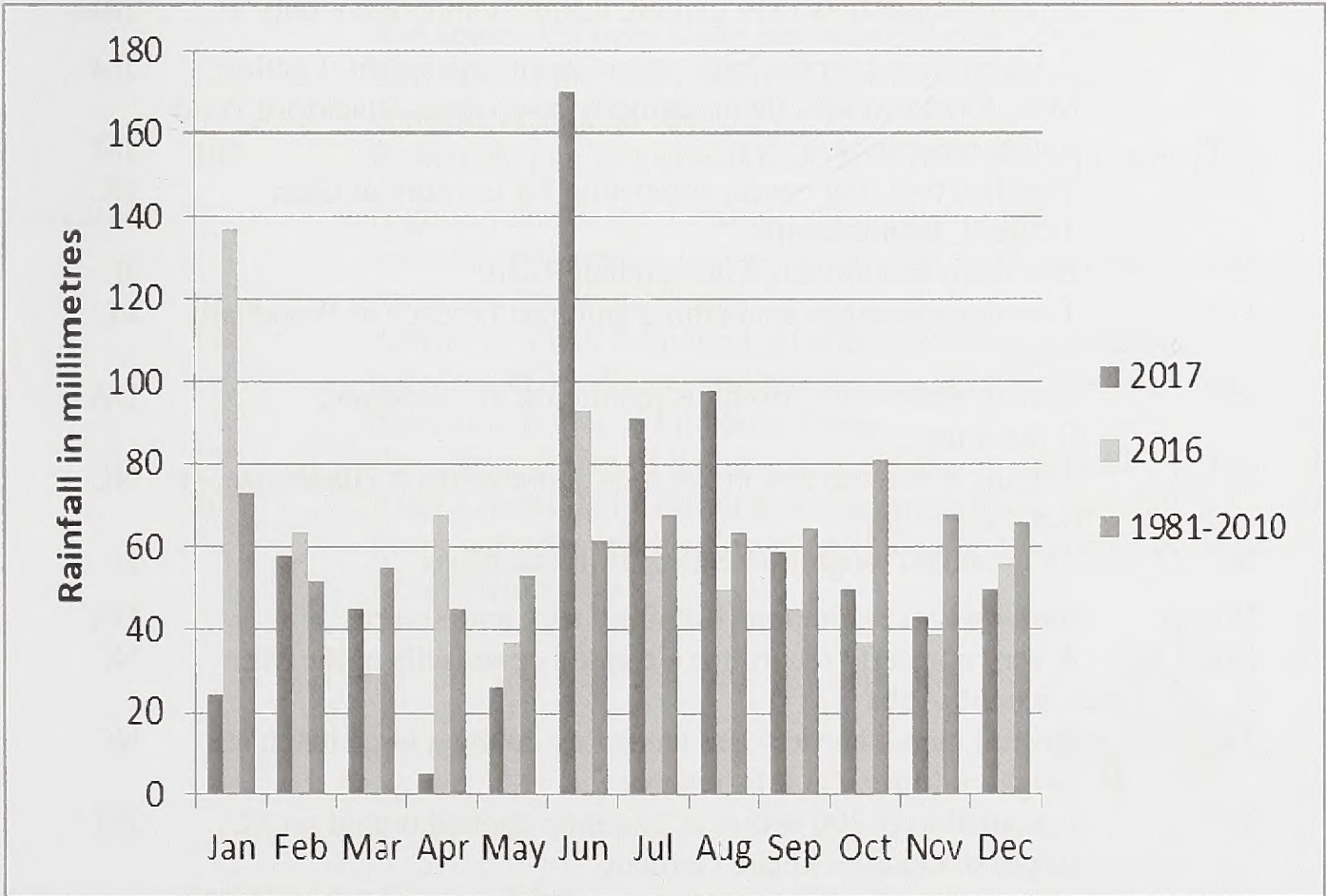


Rainfall in Corstorphine in 2017

Considering the period from 1966 to 2017, 2017 quickly acquired the reputation of being an unusually wet year. This was the result of a run of wet summer months. 170mm in June was followed by 91mm in July and 98mm in August. This summer total of 359mm was, however, well short of 2012's 454mm. The wettest single summer month was August 2008 with 211mm. 2017, taken as a whole, could not be considered particularly wet. Eight of its 12 months were drier than normal. April was particularly dry; its 5mm made it the second driest month in the whole of the period under review. Viewed from a different angle, there was a run of 16 days (26th April to 11th May) with no measurable rainfall. On the other hand the 5th and 6th of June yielded 80mm.

Monthly rainfall totals for 2017, with 1981 to 2010 averages (mm)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	24	58	45	05	26	170	91	98	59	50	43	50	719
2016	137	64	29	68	37	93	58	50	45	37	39	56	713
1981-2010	73	52	55	45	53	62	68	64	65	81	68	66	752



Members' observations

Observations and wildlife records obtained during excursions are included in excursion reports, but below is a selection of records from Members, mostly from their own walks and explorations.

Month	Date	Observation	Observer
January	21 st	Peacock butterfly flying at Hedderwick Hill, despite frosty morning	JL
	24 th	Counted 51 earthstars by track to Straiton Pond on recce.	JL
	26 th	Redwing in Grange cemetery	JM
	28 th	Long-tailed tit back – not seen since autumn last year	JMc
February	18 th	Heron flew over Esslemont Road and landed in a small garden, where it took a large frog	JMc
	27 th	A crow chasing a sparrowhawk in Blackford Glen	JM
	28 th	Unusual to hear our local blackbird singing this early, and he was accompanied by a mistle thrush	JMc
March	7 th	Long-tailed tits now regular visitors to garden, usually a pair, but today there are seven	JMc
	19 th	Five blackbirds in full song in neighbouring gardens	JMc
	24 th	Chiffchaff calling in Blackford Glen and jackdaws chasing a buzzard	JM
	31 st	Winter-visiting blackcaps still seem to be around	JMc
April	29 th	Grasshopper warbler singing in shrubbery near Carrick Knowe golf course	DA
	30 th	Pipistrelle bat flew over garden, despite temperature only 4°	JMc
May	9 th	A heron flew over the back green, an unusual sight. I gather Mary Clarkson sees them regularly en-route to Blackford Pond	JM
	11 th	Swifts have arrived	JM
	11 th	Watched two ring ousels competing for territory at Glen Traligill, Inchnadamph	NC
	15 th	Bee moth in stairwell, Fountainhall Road	JL
	17 th	Two female adders sunbathing amongst bracken at Woodhall Dean	PL
	23 rd	Bonaly Reservoir – <i>Bombus monticola</i> , <i>B. hortorum</i> , <i>B. lucorum</i>	DA
	24 th	Singing wood warbler in the west shore wood at Gladhouse – a rarity these days	NC
	26 th	Two-banded longhorn beetle, Portmoak Moss	JL
June	15 th	Barn owls at Netherton (Rothbury trip) and Soutra	DA
	18 th	A very northerly record for a banded demoiselle at the Mire Loch, St. Abbs	NC
	20 th	Several marsh harriers and an osprey taking a large tench at Leighton Moss R.S.P.B. reserve	NC
	22 nd	I counted over 200 spikes of common spotted orchid on SE slopes of George Square Gardens	JM
July	8 th	Several small skipper butterflies seen in sheltered vegetation on Longniddry Bents	MC JM JMu
	27 th	22-spot ladybird at Seafield near sewage works	DL
	28 th	Banded demoiselles in courtship, Hutton Bridge, Whiteadder	NC

	29 th	Slow-worm beside track on Ellemford Bridge excursion	JL
August	14 th	Barn owl on fence post at Ballencrieff (NT 481 779) on my way home from Nats Council meeting	PL
	19 th	Kidney-spot ladybird at Kinneil	SA
	23 rd	The first and only osprey chick at Gladhouse this year has fledged and left the nest	NC
	29 th	Small colony of solitary bees <i>Colletes succinties</i> above Clubbiedean	DA
	30 th	Greenfinches, which have been away during the summer, have been back for some time now	JM
	31 st	Family of tawny owls making a lot of noise at Balgone at dusk (NT 56 82)	PL
September	8 th	Hoopoe, The Green, Pencaitland	JL
	19 th	Final generation of speckled woods, peacocks, red admirals and small coppers at Mire Loch, St. Abbs	NC
	29 th	Holly and ivy in flower at the same time, both at Blackford Pond	JM
October	2 nd	Flock of long-tailed tits on eucalyptus in Binning Wood (NT 596 796)	PL
	8 th	Adonis ladybird at Pinkhill Station. Probably first record for Scotland	SA
	9 th	Harlequin ladybird at Winter Gardens at Saughton.	SA
	28 th	Vogrie Country Park: wood mouse, field and bank voles and pygmy shrew all caught with Longworth traps	JMc
November	5 th	300 lapwing at Stonelaws, East Linton (NT 577 806)	PL
	8 th	Red squirrel in trees along east side of Loch Leven	JL
	12 th	Bawsinch: super view of kingfisher fishing in quiet bay opposite Hangman's Rock	JMc
	30 th	Bawsinch: pair of gadwall feeding at edge of ice in same place	JMc
December		A good year for ladybirds in Edinburgh: 7-spot, 2-spot, 10-spot, 22-spot, cream, orange, eyed, pine, larch, striped, Adonis, harlequin and kidney-spot	SA
	12 th	Arrival in South Edinburgh of winter thrushes – fieldfare, redwing, mistle thrush and blackbird taking berries on hawthorn at foot of Findhorn Place	JMc
	27 th	Bawsinch: Group of five roe deer, relatively unafraid	JMc
	30 th	After a fortnight of freezing temperatures and a snowfall, a lesser celandine with a flower and a bud on the corner of Brunsfield Links	JM



Observers DA David Adamson; SA Sarah Adamson; DL Dorothy Lyle; JL Jean Long; JM Jackie Muscott; JMc Joanie McNaughton; JMu Jean Murray; MC Mary Clarkson; NC Nev. Crowther; PL Peter Leach

Nature notes

Pigeons – but what pigeons?

Earlier this summer I encountered a single pigeon on the back green unlike any other pigeon I have ever seen. I forgot about it until I saw 3 more of the same, in the autumn. They were similar in shape to Wood Pigeons and walked in much the same way, but they were smaller and entirely grey (with a touch of brown) all over – no markings except for a flash of white on the wings when they flew away. Definitely no collar. They don't seem to be native, and I wonder if anyone else has seen them, or knows what they are?

Jackie Muscott

Fantastic bees and where to find them

The place to find them is Allenheads in September. Allenheads proved to be my idea of bumblebee heaven. Sarah and I were travelling to Barnard Castle in County Durham for a week's holiday. On the UK Bees, Wasps, and Ants Facebook page I had seen a photo of a rare bumblebee, *Bombus soroeensis*, usually known as the broken-belted bumblebee or, in older books, the Ilfracombe bumblebee. The photo was taken near Allenheads, a small village high in the North Pennines close to the Northumberland / Durham border. A slight diversion from our planned route to visit Allenheads and look for this rare bee seemed justified.

We arrived at Allenheads around lunchtime on 16th September. This old lead mining village straddles a quiet road for about a mile down the East Allen valley; its elongation is because the lower settlement of Dirt Pot would now prefer to be considered part of Allenheads for some reason. In the highest part of the village is the pub, cafe and any visitor attractions, so we stopped there and started to look for these rare bees. If searching for bumblebees, the first step is to look for their preferred flowers. There were a few hanging baskets near the cafe, and the nearby gardens were full of flowers, but the only obvious wild flowers were rosebay willowherb *Chamerion angustifolium* and ragwort *Senecio jacobaea*, both growing in a semi-derelict site with "Keep Out" signs. On the rosebay were some bees, a bit docile as the temperature was only around 8 Celsius. They seemed to me to be mainly male white-tailed bumblebees, *Bombus lucorum*, but some lacked the yellow hairs usually found on the faces of that species. Those that lacked the yellow hairs I labelled as male buff-tailed bumblebees, *Bombus terrestris*, although I was puzzled by the bright lemon colour of the yellow bands on thorax and abdomen; not quite right for buff-tails.

One bee was much livelier than the rest. It had an unfamiliar colour pattern, didn't seem to notice the cold, and was darting from flower to flower. I had read that the rare bee often flew in temperatures close to freezing, so hoped that this may have been what I was after. Trying to avoid falling into a heap of building waste I managed to photograph this lively individual and posted its picture on Facebook, asking for expert confirmation that this was *B. soroeensis*.

There was some debate among Facebook users as to what the bee could have been. However nobody thought it was the rare species. One expert who read my posting had visited Allenheads the day before my visit, and had been accompanied by Steven Falk, the author of the "Field Guide to the Bees of Great Britain and Ireland". My expert gave me the grid reference of a lay-by below the village, and told me that I would find the bees feeding near there on devil's-bit scabious *Succisa pratensis*. She also said that she had found around 150 of the rare species, plus 3 of yet another rare species, the moss-carder bumblebee *Bombus muscorum*.

The weather forecast for Tuesday 19th September was sunshine and fairly warm, so we drove some 40 miles back to Allenheads confident that, this time, we would find the target species. With my expert's precise directions, what could go wrong? Well, having parked in the correct location, Sarah and I started searching for the patch of scabious. Sarah at least found autumn gentian *Gentianella amarella* in flower, but I searched river and roadside for half an hour without finding anything resembling a scabious. Eventually a dog-walker approached me and asked whether I was carrying

out some kind of survey. The dog-walker turned out to be the local botanist, and was able to take me directly to the scabious patch where, at last, I found *Bombus soroensis*.

These are small bumblebees, and the male has a distinctive peach-coloured band at the top of the white tail. They emerge later than most of the common species, and their preferred flowers are apparently scabious and a variety of other plants (including rosebay). The current stronghold of this species is north-west Scotland, and the Allenheads population appears to be very isolated; if there are no nearby populations this one may not last much longer.

I also photographed a male carder bee that I was sure was a moss-carder, but was told by the same Facebook expert that my photo was only of the common carder (I remain unconvinced). Anyway, some of the carders that I saw, but didn't photograph, may have been moss-carders, so I can console myself that there is at least a chance that I saw two rare bumblebee species in the same patch of scabious.

Finally, after arriving home, I consulted Steven Falk's book in the hope of finding an explanation for the buff-tails with the lemon-yellow colouring. He writes that "black-headed 'lucorum' males that are sometimes encountered in western and upland areas, looking like bright-banded, white-tailed *B. terrestris* males, may represent cryptic bumblebee *Bombus cryptarum*, though this is far from proven". Although I am told that *B. cryptarum* can only be separated from similar species by DNA analysis, I think that the docile bees originally found on the rosebay were likely to have been that species, and that I was fortunate enough to find at least 2, and possibly 3, species of bumblebee in Allenheads that were totally new to me. Therefore Allenheads, in September, is the place to find fantastic bees.

David Adamson

The magpies' nest

There is a very large Sycamore on the edge of our back green, and last winter revealed a Magpies' nest near its summit. I had been wondering whether the resident pair would use the nest again, when in early spring I got an answer. I happened to look out of the window just as a Magpie landed on a low branch of the tree. I watched as the bird hopped to a higher branch, and after several more hops reached the nest – a good way of concealing its location when the tree is in leaf but not so good when the tree is bare.

Jackie Muscott

Sycamore

The local sycamores *Acer pseudoplatanus* dropped huge numbers of seeds in the summer which crunched under our feet. In the October winds the seeds were seen moving through the air in a true 'helicopter' manner. It is estimated that the seeds can travel 30 to 80 metres from their parent and in strong winds many kilometres. A tree can produce over 10,000 seeds per year. Fortunately, these non-native plants, when young, are a great source of food for small mammals and many invertebrates. Phew!

Sarah Adamson

Night shift

The purpose of the expedition was to see badgers *Meles meles* emerge for their regular night-time foray. The ground was steep above the five or six sett entrances and it wasn't difficult to find a vantage point.

A sight of badgers proved elusive but the evocative noise of the family of tawny owls was adequate compensation and as we walked back to the road, we gave flight to the pheasants who had settled to roost in the trees.

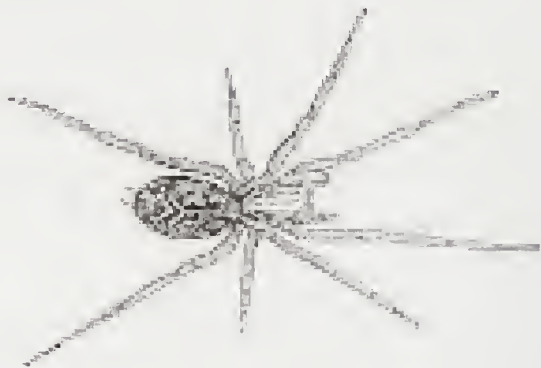
Peter Leach



The house spider

When I saw a sudden movement on the edge of the sink while washing up, I realised I had a companion, a spider which was keeping watch by a web it had made in a corner by the sink. I tried not to disturb it by sudden movement in its direction and it sat happily on the corner of the sink for several days watching me at work. It mainly caught small flies whose skeletons I had to clear up, but once it got a daddy-long-legs which must have made a good meal. Maybe too good a meal, for a day or two later I thought I was seeing double – two identical spiders? No, a spider and a ghost. My companion must have shed its skin, not something one is often aware of. Not long afterwards it disappeared, I know not where, and I tidied up the web and the ‘ghost’, but I felt a little bereft.

Jackie Muscott



The intruder

Members of Edinburgh Natural History Society are probably better placed than many to appreciate the pleasures, fascinations and joys of wildlife and the natural world.

We spend time with nature on our excursions, enjoy the company of like-minded colleagues and share the excitement of new things – a slow worm beside the track, the visit of a hoopoe to East Lothian and cetaceans in the Forth.

We also take pleasure in the repeated experience of ordinary things – the first snowdrop, a blackbird’s song, or a tree in leaf. But how do we assess the respective values of these different experiences? And do some deserve greater appreciation than others?

Why is it that the badger or the pine marten, for all of their predatory nature, are usually regarded as worthy of protection (unless the badger lives in south-west England) but the noise under the sink and the droppings near the hole in the skirting elicit feelings of resentment and revulsion, that a rat should be so bold?

Anon.



Excursion reports

Linkfield and Hedderwick NT 651 787

21st January 2017, Leader: Jean Long

A winter outing to East Lothian on a fine day is always very popular and 19 turned up at Linkfield car park for the first excursion of the year. It was a surprise to find that our route was different from any that we had followed before, in an area some of us thought we knew well. Most of the morning was spent in the familiar conifer plantation, zig-zagging from one path to another following a route chosen by our leader to show us the interesting finds she had made on her recce. Decaying pine logs which had lost their bark were a fruitful source of interest for bryologists and mycologists alike. The liverworts *Nowellia curvifolia* and *Riccardia palmata* were found together on the same pine log; and the uncommon fungus *Postia fragilis* together with the tiny *Mycena stricta* on a different pine log. At the edge of the wood, a woodpecker hole was spotted on the trunk of a dead tree. We were able to compare the cones of Scots pine *Pinus sylvestris* with the much larger ones of Corsican pine *Pinus nigra*. The morning finished with a walk along the beach collecting shells to reach our lunch spot near the Hedderwick Burn.

We crossed the burn and entered the less familiar territory of Hedderwick. The tide was out and our path was slightly higher than the extensive flats of the Tyne Estuary. We spent time trying to identify the birds feeding there – whooper *Cygnus cygnus* and mute swan *Cygnus olor*, shelduck *Tadorna tadorna*, curlew *Numenius arquata*, redshank *Tringa totanus*, oystercatcher *Haematopus ostralegus* and dunlin *Calidris alpina*. The biggest treat however, was not a bird - it was a peacock butterfly *Aglais io*. What a surprise! One member of the group left the main party and was entertained for a quarter of an hour by an assembly of around 20 long-tailed tits *Aegithalos caudatus* and 10 goldcrests *Regulus regulus* accompanied by tree creepers *Certhia familiaris*, a nuthatch *Sitta europaea*, a great spotted woodpecker *Dendrocopos major*, a robin *Erithacus rubecula*, some blue tits *Cyanistes caeruleus* and a jay *Garrulus glandarius*, all enjoying the sunshine. We passed Fox Lake which at warmer times of the year hosts water sports and an area where disc golf is played. The light was going and we headed for the car park but on the way noticed a sweet chestnut tree *Castanea sativa* which had borne many fruits, and an area of butcher's broom bushes *Ruscus aculeatus* some of the leaves of which were 'filigreed' - reduced to veins only. The count of plants in bloom amounted to 8, several more than our leader had noticed on her recce. We were certainly most fortunate to have enjoyed such a beautiful sunny day in the middle of January.

Mary Clarkson

Gullane to Aberlady NT 477 831

18th February 2017, Leader: Peter Leach

This walk was included in the 2015 excursion programme but enjoyed limited success due to very strong winds, driving rain and only four attendees! We did much better this time.

Winter interest on the coast is usually focused on birds and this excursion was no exception, with good numbers of waders, including turnstone *Arenaria interpres*, curlew *Numenius arquata*, redshank *Tringa totanus*, oystercatcher *Haematopus ostralegus* and sanderling *Calidris alba*. We also saw two grey heron *Ardea cinerea* in statuesque stillness. Shelduck *Tadorna tadorna* were evident but eyes were drawn to the large rafts of eider *Somateria mollissima* offshore.

Our route eventually left the coast as we entered the Aberlady Reserve, where there were mixed flocks of finches in evidence and fieldfare *Turdus pilaris* and redwing *Turdus iliacus* feeding on sea-buckthorn *Hippophae rhamnoides* berries. We were also treated to a fine view of a family of roe deer *Capreolus capreolus* feeding unconcernedly in a sheltered dune slack.

Our return route took us to the wooden bridge and access on to the coast road, where there was a view of several hundred wigeon *Anas penelope* at a sheltered bend in the Peffer Burn, and the improbable architecture of Luffness House. We arrived back in Gullane by way of the John Muir Way long distance footpath.

Peter Leach

Devilla Four Lochs NS 972 881

18th March 2017, Leader: Wilma Harper

We met at Righead Walled Garden - a group of 9 - and set off in good spirits, though the sky was overcast. Being new to the business of excursion reporting, I quickly found that my biro didn't work on wet paper, so a change to pencil was called for...steep learning curve!

The identification of fungi commenced before we'd even left the car park; David Adamson spotted an earthball *Scleroderma citrinum* whilst we were getting our boots on. This scaly yellow-coloured rotund fungus was mature with its interior (gleba) very dark due to the ripe spores.

It was interesting when Cameron explained how areas of conflict between the two fungi *Zylariales* (often found on rowan *Sorbus aucuparia*) and *Merismodes* create the beautiful lines in spalted wood, used widely by cabinetmakers etc.

Piptoporus betulinus (birch bracket/razor strop) and *Fomes fomentarius* (tinder/hoof fungus) were spotted throughout the walk where their favourite hosts were found (*Betula spp.*), and these common species generated an in-depth discussion on how fungi have been closely associated with humans. Cameron pointed out that both of these species had been found with Otzi the Iceman, who appeared from an Alpine glacier in 1991, having lain there for over 5,000 years; he had been carrying a specimen of each of these two fungi. They are on display with an array of well-preserved objects, including analysis of his last meal etc. in the Bozen/Bolzano Museum in the South Tyrol area of the Dolomites (I declare my interest here: I have seen Otzi myself!).

Although not rare by any means, several *Stereum* species were examined and it was good to compare the differences. As well as the common *S. hirsutum* with its smooth yellow underside, we had the hardwood-preferring *S. rugosum* and the conifer equivalent in *S. sanguinolentum*. These two latter species are best identified by the 'bleeding' spore surface when damaged, which is most pronounced in the latter.

Probably the highlight of the fungi found were several pine-preferring false morels *Gyromitra esculenta*, again by David Adamson. This morel lookalike (if you don't know what a morel looks like, imagine a brain on a stalk!) is regarded as unsafe to eat by most; however it is eaten in Nordic countries after the correct 'processing'.

In the woods we also spotted some *Chlorociboria aeruginascens* (or old name of *Chlorociboria*) fungus, which interests me particularly because of its connection with traditional marquetry veneers (turns infected wood green). Similarly, another mushroom noted was chaga *Inonotus obliquus* (a corruption of the Russian word for mushroom), which causes burr in birch, also used widely by furniture-makers. Thanks to NATS expertise I now have more information on this fascinating subject.

The path took us through plantation forest, with stacks of timber where felling is taking place. Wilma pointed out the blue-coloured dye made from urea used on the sawn timber surfaces to prevent hoof fungus *Fomes fomentarius* and root rot fungus *Heterobasidion annosum* affecting the wood. We also came across signs of the WW2 history of the area; as Wilma explained, armaments tests were undertaken by the Admiralty through firing into the Forth about 4 miles away at sacrificial targets...in fact, the Tulliallan Estate was taken over during WW2 and had provided the HQ for the Polish army, having previously had a long and varied history. After WW2, the Estate was planted with the trees of Devilla Forest.

We examined the beautiful red female flowers of a larch, which Wilma identified as the Japanese variety *Larix kaempferi*, being more commonly planted commercially than the European (which has

flowers that are more pink, with cones more slender), though there are hybrids. There was also some comment regarding the western hemlock tree *Tsuga heterophylla*, where the common name has nothing to do with the herbaceous plant hemlock *Conium maculatum* which is an umbellifer - and poisonous.

As we proceeded, through the woods and round the lochs, the terrain changed with the appearance of heather *Calluna vulgaris*, bilberries *Vaccinium myrtillus*, etc growing on sand from glacial run-off, and with invasive *Rhododendron ponticum*, remote sedge *Carex remota*, rushes *Juncus spp.*, broom *Cytisus scoparius* and gorse *Ulex europaeus*. We found red-band needle blight *Dothostroma septosporum*, which was recognised as a problem in the southern hemisphere in the '60s, but has, since the late '90s spread northwards to Canada and Europe, especially on Corsican pine *Pinus nigra*, and is now affecting lodge pole *Pinus contorta* and Scots pine *Pinus sylvestris*.

Throughout the day*, we were accompanied by plenty of bird sound, including the cackle of the green woodpecker/yaffle *Picus viridis* and the drumming of the great spotted woodpecker *Dendrocopos major*. We saw a buzzard *Buteo buteo*, and on the lochs, edged in parts with small areas of bulrush or common reedmace *Typha latifolia*, we

observed mute swans *Cygnus olor*, coot *Fulica atra*, goosander *Mergus merganser*, goldeneye *Bucephala clangula*, Canada goose *Branta canadensis* and greylag geese *Anser anser*, mallard *Anas platyrhynchos*, dabchicks *Tachybaptus ruficollis* and a pair of cormorants *Phalacrocorax carbo* - and, not least, grey herons *Ardea cineria*. The latter provided us with a clue to the most likely identity of the mystery killer of some skinned and abandoned remnants of toads which we had come across in our circuit of the lochs; the bodies were found a little inland, in the woods, one on top of a tree stump, and finally one on the bank of the Keir Loch, with a string of spawn beside it - and this is where we observed at least 30 mating/spawning toads *Bufo bufo* in the water amongst the weed at the warmer end of the loch, easy pickings for herons!



I have come recently to understand that amphibian spawn (i.e. the jelly) must expand only at the time of spawning, on contact with the water on which it depends. Perhaps, on reflection, and in retrospect, it might have been an interesting exercise to see whether the tadpoles would have continued with their development if we had returned the spawn, lying on the bank, to the water. By then, our pace was quickening, in homeward mode i.e. to the car-park where the Righthead Walled Garden Cafe and warmth beckoned.

*A day in which David Adamson apparently identified no less than 66 types of mosses/liverworts/lichens etc. - list on application to DA!

Erica Bright

Dalmeny Estate NT178 775

1st April 2017, Leaders: Wilma Harper and Sarah Adamson

We assembled by the Cramond Brig Steakhouse and welcomed Janet Watson back after a period of ill health. A couple turned up following a tweet on the Nats Twitter. One of our aims was to visit less familiar parts of the estate. Entering the estate at Burnshot Gate the group of 16 walked briskly in front of the house to the seawall just east of Barnbogle Castle and found a patch of field wood rush or Good Friday grass *Luzula campestris*. At the front of the house we looked at trees that had been planted by members of the royal family and Jean Long pointed out a poorly looking tree that had been planted by Queen Elizabeth II. On the west side of Barnbogle Castle and the camping ground we scrambled over a section of collapsed seawall and sat for lunch. During our recce we had

found a small cetacean skull and placed it in a hole in the seawall. On the day we could find neither the skull nor the hole! - unfortunately we had not taken photographs.

After lunch we headed for Peacock Ride and our access to the lake. Jean Long found a gorse shieldbug *Piezodorus lituratus* and a bee fly *Bombyliidae* family. We puzzled over a series of round holes in the ground. Eventually the Peacock Ride took us to the main drive and back towards the house. Unusually, there was hoof fungus *Fomes fomentarius* on an oak tree *Quercus* sp. We were able to see private areas of garden with spectacular *Rhododendron* spp. and other ornamental trees. Crossing the golf course we walked back onto the beach and headed towards Snab Point and over Cockle Burn - a perfect name for the burn which ran through the beach. This was constructed from layers of sand and cockle shells *Cardiidae*, seen in cross-section as we forded the water. Also good numbers of razor *Ensis* sp. and common whelk *Buccinum undatum* shells were strewn across the sand.

Our final stretch of path returned us to our starting point. Over the course of the day the weather had improved, marred only by one brief shower of rain. The estate was full of the sounds of birds at their spring best and we saw good views of buzzards *Buteo buteo*, mistle thrush *Turdus viscivorus*, long-tailed tits *Aegithalos caudatus* and great spotted woodpeckers *Dendrocopos major*. Early garden flowers included daffodils *Narcissus* sp. and forsythia *Forsythia* sp. which attracted attention from six species of bumblebee. The red-tailed bumblebee *Bombus lapidarius* was seen for the first time this year.

The day was a very pleasant start to April and we walked further than usual during a Nats outing.

Sarah Adamson

Regent Terrace Gardens, Edinburgh NT 268 743

6th April 2017, Leader: Erica Bright

A warm and sunny morning beckoned when 15 of us met at the gate in Carlton Terrace Lane, having been granted much appreciated access by the Gardens Committee.

Most of the group had not previously visited the gardens, so it was a great opportunity to explore a historic designed garden of some 12 acres at the heart of the city that is not normally open to the public - and to take in the spectacular views of Arthur's Seat and over the Forth, as far as North Berwick. The time of year meant it was still possible to see through the trees before they came into leaf, and we had a clear day.

We were welcomed by Charley Mallalieu, the full-time gardener/manager, who told us something of the history of her place of work. The gardens are the largest in the New Town still in private ownership, and occupy a triangular area formed by Regent, Royal and Carlton Terraces on the flank of Calton Hill. They were laid out about 1819 by William Playfair, with the help of the botanists Patrick Neill and Dr Robert Graham, Regius Keeper of the Royal Botanic Garden and Professor of Medicine and Botany, and they still retain their early 19th-century structure and sense of a gentleman's country retreat. A terrace at the top, planted with limes *Tilia* sp., is set above a ha-ha, which was designed to hide the boundary wall, and below it is a central lawn on sloping ground with parkland trees, and surrounded by tree-sheltered walks. A tennis court and a putting green are included within the grounds, as well as specific areas for roses (*Rosa* sp.), medlars *Mespilus* sp., and a wildlife bog area etc. so there is plenty to explore, and to occupy the attention of the lucky gardener in charge!

There are 92 stanceholders who, through a private Act of Parliament, own the land and are responsible for its upkeep, thereby protecting it for posterity - as well as preserving the peace and pleasure that the gardens offer as an escape from the hurly-burly of the city (*see note at end re access/key application*). Some common frog *Rana temporaria* tadpoles, having survived heron predation, were observed in the small pond in the bog area,



also midge larvae and marsh marigolds *Caltha palustris* at the edges. The plentiful rough ground throughout the gardens contained many flower species, including yellow archangel *Lamium galeobdolon* ssp. *argentatum*, green alkanet *Pentaglottis sempervirens*, primroses *Primula vulgaris*, wood anemones *Anemone nemorosa*, ivy-leaved speedwell *Veronica hederifolia*, red campion *Silene dioica* and comfrey *Symphytum* sp.. (in connection with nettles *Urtica dioica*, the food plant of several butterfly larvae species, we understood from Charley that one of the members of the Gardens Committee breeds small tortoiseshells, and has 15 pupae awaiting later release* into the gardens).

Some interesting tree plantings, some of which date back to the early 19th century (e.g. 2 huge sycamores near the main gate entrance), include a grey poplar *Populus x canescens* - a hybrid of aspen and white poplar, a monkey puzzle *Araucaria araucana*, Japanese angelica tree *Aralia elata* variegata and the 2 medlars, the oldest of which now depends on being propped up. In fact, many of the trees in the gardens are very old, in particular the beeches, limes and sweet chestnuts.

Unfortunately, a few of these show some signs of disease, and sometimes fine decisions have to be made as to when/whether felling may be necessary. In fact, there was some excitement on the recce made by Wilma and myself, because that very morning a hefty limb had split from one of the beeches, and remained suspended above one of the paths. We witnessed Charley, single-handedly, with some deft wielding of the chainsaw, very precisely (and impressively) bring that heavy branch down to earth, with a resounding thump!**

We came across some bracket fungus (on ash), thrip *Thysanoptera* on rhododendron, and just one buff-tailed bumblebee *Bombus terrestris*. Plenty of birdsong accompanied our exploration. Besides the regular garden birds, we spotted several long-tailed tits *Aegithalos caudatus*, a pair of chaffinches *Fringilla coelebs*, a male bullfinch *Pyrrhula pyrrhula*, a great spotted woodpecker *Dendrocopos major*, magpies, *Pica pica*, 2 mistle thrushes *Turdus viscivorus* (and on the recce a flock of fieldfare *Turdus pilaris*. Also, much to our delight, and just before our departure, we watched a pair of nuthatches *Sitta europaea* using one of the many nestboxes and obviously feeding their young. The male (presumably) kept flying to a large tree near the entrance and singing loudly, while blue tits *Cyanistes caeruleus* were also using a nestbox not far away.



All in all, the Regent Terrace Gardens are certainly one of the hidden treasures of Edinburgh, and, with good management, provide a wonderful central urban haven for wildlife.

* release of small tortoiseshells was successfully accomplished in May

** I am told, following further advice from tree specialists, and with a bat survey finding no signs of bats, that this old semi-stricken beech is to be felled, and a replacement beech planted.

Further information on Regent Terrace Garden, its history and associations with local characters etc, is available on the internet. Otherwise, contact Charley Mallalieu (office: 0131 478 0244) regarding access/key application etc.

Erica Bright

Roslin Glen Country Park NT 273 628

9th April 2017, Leader: Vladimir Krivtsov

This walk followed a similar route to that of the outing on 3rd December 2016, but in the opposite direction. We set off downstream from the old carpet factory car park, and Sarah-Louise Davies soon found alternate-leaved golden saxifrage *Chrysosplenium alternifolium*, a slightly larger and much scarcer plant than its opposite-leaved relative *C. oppositifolium*. Before we left the riverside path she also pointed out scarlet elf cup *Sarcoscypha* sp., a very colourful spring cup fungus. Leaving the river we walked beside the B7003 for a short distance before following animal paths up the wooded slope to the Penicuik-Dalkeith cycle track. We paused to listen to bird song, picking out wren *Troglodytes troglodytes*, nuthatch *Sitta europaea*, chiffchaff *Phylloscopus collybita* and blackcap *Sylvia atricapilla*, among others.

Vlad has been visiting Roslin Glen regularly, and has become particularly skilled at identifying different species by their song. Other birds seen or heard included buzzards *Buteo buteo* and a sparrowhawk *Accipiter nisus* and, on the North Esk itself, dipper *Inclus cinclus* and grey wagtail *Motacilla cinerea*.

Roslin Glen is an ideal place to learn to identify plants. Almost all the familiar woodland spring flowers were found to be in flower, or on the cusp of flowering. Unfortunately few-flowered leek *Allium paradoxum* now dominates large areas of the glen, with scarce anything else able to compete. Moschatel or townhall clock *Adoxa moschatellina* was still present here and there, and one patch had been attacked by a rust.

The mosses and liverworts were particularly dry after a couple of weeks of drought, but we were able to find and identify the dark *Didymodon tophaceus* growing on damp rocks. Stuart Maxwell had known about this population on our previous visit. A couple of very well-rotted logs were the perfect habitat for the liverworts *Nowellia curvifolia* and *Riccardia palmata*, frequently found together in their distinctive maroon and green livery.

Sarah Adamson somehow found a minute 10-spot ladybird *Adalia decempunctata* on a hawthorn leaf *Crataegus monogyna*, and followed this with a more obvious pine ladybird *Exochomus quadripustulatus* on the trunk of a beech tree *Fagus sylvatica*. Of the other insects, most of the bumblebee queens were nest searching, but bufftails *Bombus terrestris* and early bumblebees *B. pratorum* were also feeding on the flowers of few-flowered leek.

Some of us ended the day by visiting Pentland Plants for tea and cake. Thanks to Vlad for a pleasant day spent sharing knowledge and learning from others.

David Adamson

Polkemmet Country Park NS 924 629

15th April 2017, Leader: Liz Kungu

On the western edge of West Lothian, between Whitburn and Harthill, is Polkemmet Country Park. This is the home of the Scottish Owl Centre, and there is also a 9-hole golf course and driving range, a bowling green, a children's play area, plus cafe, bushcraft shop and visitor centre. The River Almond flows from the south-west to the north-east corner of the park and is flanked by the mature mixed woods of the old Polkemmet estate. For the walker there is a well-marked footpath network.

A thorough field study of bryophytes cannot be rushed or accomplished, even at the pace of a typical outing. We were never more than half a kilometre from the visitor centre in the six or more hours spent looking at mosses in a bracing north-westerly wind. The previous day's rain showers had refreshed the mosses so that most resembled the photographs in the British Bryological Society Field Guide.

The main bryophyte habitats in Polkemmet are: trees hosting a rich mixture of epiphytes; fallen timber with different communities depending upon the stage of decay; the woodland floor itself; large glacial boulders in and around the River Almond; man-made stonework such as walls; and the exposed soil at the edge of paths and cut grass areas. Due to this variety of habitats, and to the knowledge of our leader and her assistants, the moss and liverwort list from today and a preparatory visit easily exceeded 100 species. The writer would be happy to email the list to anyone interested. In the morning we covered the area between the Visitor Centre and the river, including a small part of the woods immediately south of the driving range. After lunch we first examined the muddy fringe of a lawn near the car park, and then walked towards the Horn sculpture near the M8, before crossing the Almond and returning to the Centre via the Baillie mausoleum. Not everyone can sustain an interest in an intensive search for bryophytes for a full day, so some visited the Scottish Owl Centre in the afternoon and found it to be excellent.

Our first stop was to examine the bryophyte flora on and around a beech tree near the play park. After we appeared to have found and named all the species within reach, Simon Kennedy managed to find a miniscule liverwort called *Microlejeunea ulicina* in a bark crevice. According to the Field Guide, as well as being very small (shoots to 6 mm) this liverwort is normally confined to the west of Scotland, so this was probably on the eastern edge of its range and is a vice-county record. The muddy fringe of a lawn beside the main car park initially appeared to be full of a large thallose liverwort called *Marchantia polymorpha*, one of the first liverworts noticed by beginners to bryology. On closer inspection we managed to find a range of small, unusual bryophytes including *Riccia sorocarpa*, *Fossombronia pusila*, *Lophozia excisa*, *Pleuridium acuminatum* and *Tortula truncata*, which showed that even the least promising habitat can be home to unexpected species. Later, Liz found a second vice county record by the Almond, being *Lejeunea lamacerina*. Finally, Cameron has provided this note on the fungi that he found:

Conditions had been dry for quite some time beforehand and this can deter many of the larger, more water demanding species from fruiting however this just meant that attention was paid to the smaller and more resilient species.

Key highlights included *Glyphium elatum*. This is best described as a black axe head protruding up out of the dead wood, with 'blade' upper most. This was found by several members on a number of occasions.

Skeletocutis amorpha, a conifer-preferring bracket fungus is dull white from above, yet when turned over has a beautiful apricot-coloured under surface, so making it quite an easy species to identify in the field.

Quite a few members spotted the dried out remains of the wood puffball *Lycoperdon pyriforme* that had remained almost intact from last autumn.

There was a couple of 'mushroom types': the soft orange brown-gilled *Melanolenca cognata* was one of the largest whereas an *Omphalina* sp. was one of the smallest, growing in amongst the liverworts on the edge of a well-manicured lawn.

Thanks to Liz Kungu for leading us and sharing her great field identification skills.
Thanks also to those members with varying levels of interest in bryophytes who participated in the outing on an inclement day.

David Adamson

Bawsinch SWT Reserve NS 284 724

29th April 2017, Leader: Stuart Maxwell

Eighteen people turned up on a cool but bright sunny day. Seven people needed to leave early so a small jaunt around the main wooded area of Bawsinch was conducted so that people could leave just after 12.00. Grasses were compared in the wild flower meadow; meadow foxtail *Alopecurus pratensis* and sweet vernal grass *Anthoxanthum odoratum* were readily apparent. The orange rust on juniper stems *Gymnosporangium clavariiforme* was observed in a dried state. Many warblers were in full song with chiffchaff *Phylloscopus collybita* and blackcap *Sylvia atricapilla* singing with wren *Troglodytes troglodytes* and robin *Erithacus rubecula*. Orange tip *Anthocharis cardamines* and comma *Polygonum c-album* butterflies were seen, as well as buff-tailed *Bombus terrestris* and common carder *Bombus pascuorum* bees.

Passing a number of small ponds the flowers of marsh- marigold *Caltha palustris* and bogbean *Menyanthes trifoliata* and leaves of butterbur *Petasites hybridus*, bulrush or common reedmace *Typha latifolia* and rush *Juncus sp.* were compared. The remainder of the party walked through the bird sanctuary towards the western reed beds. Close views of the heronry and some late teal *Anas crecca* and gadwall *A. strepera* were seen.

Lunch was taken in the large field to the west of Duddingston Loch know as Murder Acre, sitting on an old ant hill. Ravens *Corvus corax* cronked overhead and three roe deer *Capreolus capreolus* ran by, demonstrated their fleetness of foot.

In the wet areas marsh pennywort *Hydrocotyle vulgaris*, marsh-marigold *Caltha palustris* and ragged-robin *Silene flos-cuculi* were observed. We returned via the Wells O' Weerie and along the low road towards Duddingston village. I pointed out sticky catchfly *Lychnis viscaria* in bud on the way, before the party retired for tea at the Kirk Teahouse.

Stuart Maxwell

Conifers at the Botanics NS 244 752

3rd May 2017, Leader: Tom Christian Project Officer, Conifer Conservation RBGE

I had met Tom Christian at a Royal Scottish Forestry Society meeting and was struck by his knowledge of conifers and his enthusiasm for the subject. I was therefore very pleased when he agreed to lead a Nats excursion focussing on the work of the Perthshire Big Tree Country (PBTC) Conifer Conservation Programme and how the Living Collection in the Botanics contributes to this. He was also going to give us some tips on how to identify the main groups of conifers.

We were all very grateful to Tom Christian for taking the time to show us round the garden and share his knowledge and enthusiasm for conifers with us.

Wilma Harper

Tom Christian's informative commentary is summarised by Wilma in an article on page 64.

Toxside , Midlothian NT 280 528
6th May 2017, Leader: Kevin Ingleby.

A 9 a.m. start enabled the title ‘Morning chorus’ to be used instead of ‘Dawn....’.

On a day of blue sky and bright sunlight, despite the cold wind, we were optimistic about a good haul of species. On our recce on the previous Tuesday Kevin and I had seen about 40 species on a grey cold day. A baker’s dozen assembled at the tree belt near Tweeddaleburn spurred on by a cuckoo *Cuculus canorus* calling, now an uncommon visitor, and for almost all, the first of the year. We headed along the track flanked by mature Scots pines *Pinus sylvestris* and various broadleaves. Our hope of redstarts *Phoenicurus phoenicurus* and spotted flycatchers *Muscicapa striata* was not fulfilled, but treecreepers *Certhia familiaris*, goldcrests *Regulus regulus*, coal tits *Periparus ater* and blue tits *Cyanistes caeruleus*, several leaf warblers, wrens *Troglodytes troglodytes* and robins *Erithacus rubecula* all assured slow progress. In the fields to the south, grey lag *Anser anser* and Canada *Branta canadensis* geese grazed unconcerned, with skylarks *Alauda arvensis* and curlew *Numenius arquata* flying territorially. On the north side lapwings *Vanellus vanellus* and black-headed gulls *Larus ridibundus* contested space in the rough grassland. The first of several brown hares *Lepus europaeus* was seen and unexpectedly two winter migrants were still here, a dozen fieldfare *Turdus pilaris* were flushed into the far tree belt and a splendid cock brambling *Fringilla montifringilla* flew into the nearest copse.

As the tree cover became more open, our wish list seemed possible. Tree pipits *Anthus trivialis* were making parachute flights from tree to tree distinguishing themselves from more common meadow pipits *Anthus pratensis*. A male tawny owl *Strix aluco* hooted unseen in dense vegetation and we spent 20 minutes watching a family party of crossbills *Loxia curvirostra* in a mature stand of pines and spruces. The female of the group had two white wing bars, a rare aberration closely resembling the two-barred crossbill *Loxia leucoptera* only rarely seen. A pair of coal tits *Periparus ater* prepared the lining of their nest in a low-lying tree stump. Two cock bullfinches *Pyrrhula pyrrhula* peeped at each other and a male reed bunting *Emberiza schoeniclus* adorned a fence for a few minutes. A dunnoek *Prunella modularis* sang sweetly in a group of spruces, whilst siskins *Carduelis spinus* and lesser redpolls *Carduelis flammea* teased us with their tweeting. We were not treated to a flock of the latter, 110 strong, as we had been the previous Tuesday.

We were disappointed to find the site most notable for large heath butterflies *Coenonympha tullia* had dried out since previous years due to a combination of a very dry winter, the cutting of drainage channels and planting of trees. The larval food plant, cotton grass *Eriophorum angustifolium* was little evident. We did record orange tips *Anthocharis cardamines* and green veined whites *Pieris napi* for which now was the flight period. David spent time looking for mosses and other insects. Three species of common bumble bee and several solitary wasps of the genus *Andrena* were found. Sarah meanwhile had found two unusual ladybirds, striped *Myzia oblongoguttata* and larch *Aphidecta oblitterata*. As well as seeing and hearing a raven *Corvus corax* Sarah-Louise had found a drinker moth caterpillar *Euthrix potatoria*, much smaller than normal at this month. Several surprised roe deer *Capreolus capreolus* were disturbed by our passage, still in grey winter pelage. A lucky few also saw a stoat *Mustela erminea* and others an unlucky dead common shrew *Sorex araneus*. The impact of no water was most evident as we progressed through the area of hollows filled with wet heath, normally showing an abundance of calcifuge flowering herbs and mosses. The only plants particularly noted were the two clubmosses, Alpine *Diphasiastrum alpinum* and stag’s horn *Lycopodium clavatum*. Other than well-known species only one moss was sufficiently hydrated to allow identification, which was *Orthotrichum stramineum*.

On the return journey from Cockmuir, unexpectedly, Teal *Anas crecca*, grey wagtail *Motacilla cineria* and linnet *Carduelis cannabina* were seen, and stonechats *Saxicola rubicola* found on the heathland where they had been discovered on the recce. It was only a short diversion at the end of the day for several people to see the only ospreys *Pandion haliaetus* in the area. Our thanks go to Kevin for his acute vision and keen hearing which were instrumental in reporting over 50 species.

Neville Crowther

Valleyfield Pond and Beeslack Wood NT 237 597

11th May 2017, Leader: Jean Long

On a fine day, just four of us met at Valleyfield Pond car park on the outskirts of Penicuik. Progressing towards the area of the pond, we found green alkanet *Pentaglottis sempervirens* in flower, Pyrenean valerian *Valeriana pyrenaica* (not indigenous), tuberous comfrey *Symphytum tuberosum*, and cuckoo-pint *Arum maculatum* (some with a dark purple spadix), pendulous sedge *Carex pendula*, yellow iris *Iris pseudacorus*, bogbean *Menyanthes trifoliata*, water mint *Mentha aquatica*, hairy wood-mint *Blephilia hirsuta*, and the tall seed heads of purple loosestrife *Lythrum salicaria*. Also noted were American pondweed *Elodea canadensis* and marsh marigold *Caltha palustris* (I learnt that its yellow 'petals' are in fact inverted egg-shaped sepals: real petals and nectaries are lacking). No water birds were seen.

Being my first visit to this site, it was interesting to learn about the Valleyfield Mills complex, owned by the Cowan family, and the paper-making industry which flourished from about 1779 to 1975. The Mill buildings were demolished in the late '70s, and the associated reclamation and environmental improvements were completed in 1994.

From the pond, we crossed the footbridge and the North Esk and enjoyed the song of chiffchaff *Phylloscopus collybita* and wren *Troglodytes troglodytes*. We came across some of the remains of buildings and tanks connected with the paper mill, now being colonised by monklet flower *Mimulus sp.* and opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*.

Keeping to the edge of the wood, there were many spring flowers: greater stitchwort *Stellaria holostea*, water avens *Geum rivale*, wood sorrel *Oxalis acetosella*, forget-me-not *Myosotis sp.*, the more dainty native bluebells *Hyacinthoides non-scripta*, ramsons *Allium ursinum*, burdock *Arctium minor* agg., bush vetch *Vicia sepium* and mouse-ear hawkweed *Pilosella officinarum*. A birch shieldbug *Elasmotethus interstinctus* (on gorse) was spotted by Sarah with her particular knack in this respect!

Approaching Lady's Wood, we found wood horsetail *Equisetum sylvaticum* flowering. Close inspection of some with cones revealed hexagonal scales arranged in whorls. We saw the spores were green when shaken onto white card, as demonstrated by Jean. The path was lined with hard fern *Blechnum spicant* and broad buckler fern *Dryopteris dilatata*, and it was good to spot a small tortoiseshell *Aglais urticae* and a silver ground carpet moth *Xanthorhoe montanata*. The wood contained rowan *Sorbus aucuparia*, bird cherry *Prunus padus*, whitebeam *Sorbus aria*, common hawthorn *Crataegus monogyna*, oak *Quercus sp.*, ash *Fraxinus sp.* (not yet in leaf) and goat willow *Salix caprea*, also known as great sallow. To confuse matters, grey willow is known as common sallow. We came across plenty of common dog-violets (*Viola riviniana*), honeysuckle *Lonicera periclymenum*, barren strawberry *Potentilla sterilis*, great wood-rush *Luzula sylvatica* (indicator of ancient woodland) and foxgloves *Digitalis purpurea*.

The Esk Bridge brought us to the old railway track, which passes under a fine stone bridge with a skew (or oblique) arch and some interesting brickwork pointed out by Jean (apparently, by the early 19th century the principles of construction of a skew arch were fully understood and it became easier and cheaper to use brick rather than stone). Here in the moist shade we found hart's-tongue fern *Asplenium scolopendrium* and mosses/liverworts struggling on the poor/dark surfaces. Further along where there was more light we found germander speedwell *Veronica chamaedrys* and lady's-mantle *Alchemilla vulgaris* agg.

At this point we left the track for a small footpath nearer the river, here with a shingle bed, with common figwort *Scrophularia nodosa*, sweet cicely *Myrrhis odorata*, butterbur *Petasites hybridus* (mostly leaves now with few flowers), Himalayan balsam *Impatiens glandulifera*, Jack-by-the-hedge or garlic mustard *Alliaria petiolata* and marsh ragwort *Senecio aquaticus*. An old cistern drew my interest as its cover proudly advertised the ubiquitous Bo-Ness Iron Company Ltd! By now trailing behind the group, I was lucky to spot a common shrew *Sorex araneus* as it emerged from a fallen beech trunk nearby (some large beech trees here, perhaps c150 years old). I could quietly observe the shrew as it moved back and forth through passages in the undergrowth obviously on the hunt for something tasty!

Following the river, we came to where the Loan Burn, which flows through Beeslack Wood, joins the River North Esk (which becomes the Esk in Dalkeith Country Park on its final journey to Musselburgh). Erosion of the bank had exposed the roots of two large beeches. Besides lush ramsons *Allium ursinum* and a few few-flowered leek *A. paradoxum*, the ground was covered, rather unusually, with *Tolmiea menziesii*, a native of Western N. America (also known as pick-a-back plant, youth-on-age, and thousand mothers!), with many flower spikes. There was also some discussion about a particular plant flowering along the river banks; this was subsequently identified by Barbara Sumner via Marion Moir as being greater cuckooflower *Cardamine raphanifolia*. Climbing back up to the main track we looked at the waterfall just below the bridge over the Loan Burn before entering Beeslack Wood, with more of the greater cuckooflower. Immediately turning off, we walked up through the mature woodland, offering good views below and beyond to the top of the high river bank opposite.

Beeslack Wood is an ancient semi-natural woodland surrounding the grounds of Beeslack Community High School and Aaron House residential care home (close proximity to housing might explain garden escapes/invasive species). Together with Lady's Wood, its southern section, it has been managed by the Woodland Trust since 1995, and information boards are provided along the route. The tree plantings, dating back to the mid-1800s, include tree species we had not seen earlier in the day: common yew *Taxus baccata*, wellingtonia *Sequoiadendron giganteum*, Douglas fir *Pseudotsuga menziesii*, lime *Tilia sp.* etc. together with fallen dead beech stumps...these old tree plantings have somewhat taken over the areas which previously may have been 'where the bees love to gather', being the possible original meaning of the name Beeslack (Bees Lurk).

Once at the top, we turned on to a footpath which took us along by Aaron House, formerly Beeslack House, a fine building with unusual windows, built 1855-57 for the Errington family and later owned by the Cowan mill-owners. We passed two ponds, one rectangular, the other circular, and descended to a sunny grassy spot back near the Loan Burn, where we spotted a mallard drake *Anas platyrhynchos* and watched a great tit *Parus major* taking nesting material into a hole in a tree. Climbing steps onto the main road along from the High School, we took a bus into Penicuik town centre, and our excursion concluded with partaking of afternoon tea in the Clock Cafe.

Erica Bright

Deil's Cauldron - Coach trip

13th May 2017, Leader: David Adamson

Our coach took us from Edinburgh to Monument Road, Comrie, the starting point for today's clockwise circuit of the woodlands on either side of the River Lednock. There are two "cauldrons", the Little and the Deil's, and we viewed them both from platforms at the foot of flights of wooden steps built onto the steep sides of the river gorge. The river cuts through the hard rocks in a series of falls and rapids, sometimes appearing from below protruding rocks. Dippers *Cinclus cinclus* seemed to find the deep pools and plunging falls to their liking.

Two months virtually without rain ended today, but the real downpour held off until we had completed our walk and were in Cafe Comrie. Today the low clouds hid the hills and even the top of the Melville Monument, but there was much to admire closer at hand, particularly the variety of greens as the different trees came into leaf; the oak, birch, hazel, and beech all have their distinctive shades. Joanie, Steuart, and Stuart drew our attention to the bird life of these woods, while others admired the oak *Gymnocarpium dryopteris* and beech *Phegopteris connectilis* ferns and the spring flowers. Lyn found some wood goldilocks *Ranunculus auricomus* in the same area below the road where we had come across it on our visit four years previously.

Ravens *Corvus corax* were calling above us from the Melville Monument crags while we took lunch. After crossing the river in the afternoon we saw two take off from their nest. Sarah-Louise led us to where a tree pipit *Anthus trivialis* was calling and giving a display flight. Steuart saw a red kite (*Milvus milvus*), and some of us glimpsed an osprey *Pandion haliaetus* after Stuart had alerted

us to it passing overhead. Other notable birds in the woodlands were wood warblers *Phylloscopus sibilatrix*, redpoll *Carduelis flammea* and redshank *Tringa totanus*, while swifts *Apus apus*, swallows *Hirundo rustica* and house martins *Delichon urbica* had arrived in the village itself.

Apart from some friendly non-biting midges at lunchtime we saw few insects, with only three individual bumblebees and a single ladybird recorded. However we did find an iridescent dor beetle *Geotrupes stercorarius* carrying mites on its underside. Our handling of the beetle probably concerned it more than the mites did. Perhaps the best views of any animal, dor beetle excepted, were of a red squirrel *Sciurus vulgaris* that stayed near us for five minutes, probably reluctant to stray too far from its feeding station on a tree trunk.

Cafe Comrie managed to provide the ten who had completed the circuit with reviving cups of tea and cakes. Then we dashed through the rain to reach our coach for the return trip to Edinburgh.

David Adamson



Inch Park NT 276 707

17th May 2017, Leader Vladimir Krivtsov

It was a pleasant evening when a party of Nats gathered outside the Community Centre at Inch Park. Although it's not far from Marchmont and close to the Cameron Toll shopping centre, I had never been there and had no idea it existed, so the visit came as a pleasant surprise. A part of the Braid Burn runs through the north west of the park, and I understand that the marshy area at the north end and the playing fields together act as a flood area to protect the shopping centre.

There are some interesting trees including monkey puzzle *Araucaria araucana* and dawn redwood *Metasequoia glyptostroboides*, while horse chestnuts *Aesculus hippocastanum* and a red chestnut *A. carnea* were in full flower. So was a large oak *Quercus sp.* which had currant galls on some of its male catkins. These galls are produced by the sexual generation (males and females) of the wasp *Neuroterus quercusbaccarum*. The wasps emerge in the spring, mate and lay their eggs on oak leaves and catkins. An autumn generation which is all female emerges from these galls and lays eggs on the underside of oak leaves producing common spangle galls, the source, in turn, of the spring generation.

At ground level one of the more unusual meadow plants was bulbous buttercup *Ranunculus bulbosus* which has a rather bulbous base, but can be identified by the turned-back sepals (so you don't need to dig it up). A rather dainty plant on a damp slope with a concrete mesh was changing forget-me-not *Myosotis discolor* whose flowers are yellowish when they first open, but soon turn blue. In the marshy area there were some nice water plants. Marsh marigold *Caltha palustris* and brooklime *Veronica beccabunga* were both in flower but others like water forget-me-not *Myosotis scorpioides* and monkeyflower *Mimulus sp.* were still to bloom.

We were delighted to see swallows *Hirundo rustica* flying overhead and a pair of blue tits *Cyanistes caeruleus* nesting in a box which had been provided.

Thanks to Vladimir for introducing us to a rather attractive little park.

Jackie Muscott

Roslin Glen NT 272 632

20th May 2017, Leader: Heather McHaffie

On a rather wet day a select group of us met at the Chapel car park and walked down towards the Castle. On the graveyard retaining wall above the path we saw the diminutive wall rue *Asplenium ruta-muraria*. It was early in the season to see deciduous ferns so we were glad to look at evergreen ones such as this. Next we found maidenhair spleenwort *Asplenium trichomanes* growing on the walls of the bridge to Roslin Castle. Going back below the bridge we went off upstream to look at a damp area. We saw the old stems of the great horsetail *Equisetum telmateia* and one of us found a late spore-bearing cone. There were shrivelled remains of other cones. This horsetail produces special pinkish cones in early May before the shoots. We could see our cone still had green spores. Going back downstream we saw the hart's-tongue fern *Asplenium scolopendrium* below the castle bridge. The hard shield-fern *Polystichum aculeatum* grows on the ruined walls beside the path. We saw the pinnules shaped like little mittens. Going downstream again we saw the shrivelled remains of ferns not yet producing their summer growth although some such as the broad buckler-fern *Dryopteris dilatata* could be identified by the dark scales with pale margins on the curled croziers. We went down the steep path towards the river where there were large clumps of the hard fern *Blechnum spicant* with two kinds of fronds; the more slender had borne the spores, the more robust were vegetative. Beside the river on the rather rocky path there are earthy banks washed clean at flood time. Here the profuse quantities of fern spores from above ensure newly colonising ferns. We were able to see the tiny gametophytes that grow from the spores before fertilisation, and also the equally tiny first fronds that subsequently appear. We retraced our steps and found a sadly shaded clump of soft shield-fern *Polystichum setiferum* in a laurel bush where three paths meet. Due to the weather we had a short day but nevertheless had seen a good number of species.

Heather McHaffie

Cramond Hinterland NT 190 770

23rd May 2017, Leaders: committee

The motivation for this trip was that the starting point was served by a regular bus service and to explore the generally neglected parts of Cramond. Behind the busy esplanade sit some rough fields and bits of woodland. The recce revealed a slightly unappealing rubbish heap that looked as if it would soon disappear under new housing.

We met in the main car park and gathered beside a slope swathed by a tall herbaceous plant. The area had been a Roman archaeological excavation site until a stone lion's head was found nearby and the area was declared a protected archaeological site. The landform was completely masked by a tall (about 1metre) herbaceous plant. The introduced plant Saracen's woundwort *Senecio sarracenicus* is also known as broad-leaved ragwort. Culpepper, 1792, stated that Germans preferred this herb above all others for wound healing. He seemed not to be as keen and commented on its strong, unpleasant flavour and smell. However, he then goes on to list its qualities in treating a number of conditions in a similar way to sanicle *Sanicula europaea* and bugle *Ajuga reptans*.

The enclosed woodland round Cramond House and the kirk was home to many introduced trees, a mix of mature specimens and some younger planted trees around 20 years old. A juvenile specimen of Wellingtonia *Sequoiadendron giganteum* looked quite different to the majestic 'punch tree' of mature collections. This area is of amenity value to walkers, cyclists and for barbecues but the remains of a trim trail set up when the PE College 'Dumf' was in operation had become overgrown by 20 years of tree and scrub regeneration.

What looked like dead man's fingers were discovered hiding on some rotting wood. Probably named *Xylaria polymorpha* for a good reason, they were at a stage producing conidia and were pale and two-toned. Later we found some large dryad's saddle *Polyporus squamosus*, about 1metre across, on fallen specimen trees in the fields.

Cutting through a hedge to the area from the recce, a substantial section was raised and looked like a combination of stored topsoil and demolition material. Within the area there were pools and gullies with associated plants such as bulrush or common reedmace *Typha latifolia*. Roe deer *Capreolus capreolus* are seen quite often in this area and a kestrel *Falco tinnunculus* was seen hovering.

The area above Silverknowes Promenade, which had previously been grazed, was now mainly used by significant numbers of dog walkers. Green-veined white butterflies *Pieris napi* were seen in the long grass and on lady's smock *Cardamine pratensis*. There were remnants of the old trees of parkland with a view well into East Lothian. The former designed landscape of Cramond House is now degraded but with some imagination we could see that the avenue of trees from the house once aligned with a view of the Bass Rock.

Sarah Adamson and Wilma Harper

Burnmouth Coast Walk. NT 953 607

27th May 2017, Leader: Iain Cowe of Butterfly Conservation

The route southwards from Burnmouth to Lamberton Skerries took us through largely herb-rich grassland dominated by calcicole plants. There were many ant-hills of the yellow meadow ants *Lasius flavus*.

Iain set off at a good pace so that we were able to spend as much time as possible at the butterfly 'hot-spots' bearing in mind that cloud was forecast for later on.

The first notable find was the thistle tortoise beetle *Cassida rubiginosa* that was trying to camouflage itself on a green leaf. In the same sheltered spot was also found the larva of the nettle-tap micro-moth *Anthophila fabriciana* of which we were later to see the adult.

A short while later we began to see the gorgeous small blues *Cupido minimus* dotted along a good stretch of the walk, with one particularly minute specimen near the end of the return route. Its wings were tightly folded, perched on a blade of grass as if hoping against hope that the sun would reappear! The food plant of the small blue, kidney vetch *Anthyllis vulneraria* was in abundance reflecting the good numbers of the butterfly flitting about.

The most exciting find of the day was the small elephant hawkmoth *Deilephila porcellus*. Most of us, and that included Iain, had not seen one before. It was in such a pristine condition that Iain thought that it may well have just emerged and had not made its first flight. A similar species, though larger, is the elephant hawkmoth *Deilephila elpenor* which is more common whereas the small elephant hawkmoth's distribution is local. Its food plant is mainly bedstraws particularly lady's bedstraw *Galium verum*. Happily for all the photographers it was not camera shy! We were very fortunate indeed to see this species found by a member of Butterfly Conservation.

Two teneral (newly emerged) damselflies were seen. Their wings were shiny in appearance and their bodies were rather drab in colouration so that we were unable to identify the species. An azure damselfly *Coenagrion puella*, observed by Neville Crowther was a blue version of a female.

The bright colours of the cinnabar moths *Tyria jacobaeae*, of which there were about half a dozen, caught our attention. The food plant is common ragwort *Senecio jacobae*. I am sure most of us will have seen the black and white larvae devouring it with gusto. The pale straw pearl micro-moth *Udea lutealis* was also seen as was the silver-ground carpet *Xanthorhoe montanata*. Both species are very common.

On a single dandelion *Taraxacum* sp., about a dozen minute cocksfoot moths *Glyphipterix simpliciella* were noticed jostling for space. They were so tiny that a hand lens was needed to appreciate their beautiful markings. A few of the attractive micro-moths, *Ancylis badiana* were also seen very obligingly resting on a leaf for us to study.

A single, mainly black larva of a common footman moth *Eilema lurideola* was found on the stone wall, and along the path edges a good number of drinker moth's larvae *Euthrix potatoria* were spotted. The latter were really large and ready to pupate.

Stuart Maxwell pointed out to us a small area of fern-grass *Catapodium rigidum* growing on top of the stone wall. It looked just as its name suggests, like a miniature fern, being about 5cms in height, though it can grow to 20cms.

There were many larvae of the six-spot burnet moth *Zygaena filipendulae* along with yellow cocoons that were very exposed on long stems of dead grasses. Their caterpillars which are brightly coloured, greenish-yellow with prominent black markings and white hairs, feed on bird's-foot-trefoil *Lotus corniculatus* which was plentiful. The adult moths emerge in late June or July. David Adamson found a gorse shieldbug *Piezodorus lituratus* and on the same gorse *Ulex europaeus* he spotted another at the centre of a spider's web with a large spider in attendance! Unfortunately, the spider could not be identified as it was facing the wrong way.

Sarah Adamson

Torduff Reservoir NT 202 678

31 May 2017, Leader: David Adamson

This outing had been advertised as being to Bonaly Reservoir, however a preparatory visit to that reservoir had been unproductive and since the prospect of a slog up a steep hill on a hot day lacked much appeal, we unanimously agreed to change our destination and head towards Torduff reservoir instead. This turned out to be a fortunate decision as we were rewarded with plenty of natural history interest.

We took the gentle path to the south end of the dam of Torduff Reservoir, crossing to the metalled road that gradually climbs to Clubbiedean Reservoir. At Clubbiedean we again crossed a reservoir wall, and then returned to the Bonaly car park following the outward route. On the return journey we noticed flowers of common cow-wheat *Melampyrum pratense* which we had overlooked earlier. Torduff Hill appears to be its Pentlands stronghold.

The flowers of raspberry *Rubus idaeus* attracted large numbers of bumblebees of at least 8 species. The blaeberry bumblebee *Bombus monticola*, the tree bumblebee *B. hypnorum* and the forest cuckoo bumblebee *B. sylvestris* were particularly noticeable. In contrast we noted only single specimens of the heath bumblebee *B. jonellus* and the red-tailed bumblebee *B. lapidarius*. Among the 6 butterfly species seen were red admirals *Vanessa atalanta*, which had a bumper late summer and autumn. Apart from a pupa case of a 6-spot burnet moth *Zygaena filipendulae* we saw, in flight, pine looper or bordered white moths *Bupalus piniarius* and common heath moths *Ematurga atomaria*.

For birdwatchers there was a good range of fairly common summer visitors, including blackcap *Sylvia atricapilla*, willow warbler *Phylloscopos trochilus*, chiffchaff *P. collybita*, swallow *Hirundo rustica*, house martin *Delichon urbica* and swift *Apus apus*. The only lichen that stood out as being a bit different was an *Acarospora* species growing on a dry stane dyke.

Finally it was particularly good to have Tom Delaney back with us after a few months out of action.

David Adamson

Loch Ardinning NS 564 779

3rd June 2017, Leader: Joanie McNaughton

The Nats' third visit to Loch Ardinning (2008 and 2011 being the others) did not fail to please, despite the weather. After a pleasant morning surrounded by louring black clouds, the storm arrived at lunch with spectacular thunder, lightning and torrential rain. Didn't stop us though!

The glory of this SWT reserve is its variety of habitats - quarry, woodland, meadow, wetland and heath, with stunning views across the Blane Valley towards the Campsie Hills and its volcanic plug Dumgoyne, and beyond to Loch Lomond and the Arrochar Alps and Ben Lomond. Loch Ardinning is natural, occupying a glacially-excavated hollow. It was enlarged in the 19th century by building a

dam, the water used to serve mills in the Blane Valley. The adjacent quarry provided sandstone for the main road foundations.

The first insect we found was nettle weevil *Phyllobius pomaceus*, both singly and mating pairs, in the quarry. Both large red *Pyrrhosoma nymphula* and common blue *Enallagma cyathigerum* were here, the only damselflies found on the day. Sadly no dragonflies were flying, and only one bumblebee, forest cuckoo-bee *Bombus sylvestris*.

I was interested to hear a nice wee story from Ian McCallum of his time doing voluntary work on the reserve planting mixed trees. Ian himself planted a three-year old Scots pine in 1979. Photo available of the grown-up tree on request! The path took us through alder and willow carr, with extensive patches of bog myrtle *Myrica gale* in flower. It thrives where relatively clean water continually runs through its roots and the lie of the land and sandstone rock strata here provides exactly the conditions it likes. Here we found alderfly, *Sialis lutari*, crane flies *Tipula maxima*, *T. oleracea* and I was pleased to find and photograph a hairy-eyed crane fly *Pedicia rivosa* with its distinctive wing markings and scorpionfly *Panorpa germanica*.

I had previously received a moth (2010-2016) and butterfly list from the Convenor, Sven Rasmussen, and a note in brackets after each moth of the number of individuals and the year last recorded. Near the loch we had clouded border *Lomaspilis marginata* (18-2016), silver ground carpet *Xanthorhoe montanata* (33-2016) and common white wave *Cabera pusari* (5-2015). Higher up, on bracken, was brown silver-line *Petrophora chlorosata* (12-2011). However, emperor moth *Saturnia pavonia*, small argent & sable *Epirrhoe tristata* and bee moth *Aphomia sociella*, all of which we found, were not recorded on the reserve list. Our two target butterflies, small pearl-bordered fritillary *Boloria selene* and green hairstreak *Callophrys rubi* were both found, the latter on its foodplant blaeberry *Vaccinium myrtillus*.

We recorded 28 birds. Sadly, only heard but a record nonetheless, was a water rail calling from the lochside. We also heard a grasshopper warbler *Locustella naevia* reeling, but did not see it. A displaying tree pipit *Anthus trivialis* on birch, lesser redpoll *Carduella flammea* and 3 crossbills *Loxia curvirostra* on Larch were nice to see. I had spotted a pair of cuckoos *Cuculus canorus* on the reserve during the recce so we were delighted to see one during the excursion itself. Both song *Turdus philomelos* and mistle *Turdus viscivorus* thrush were seen and heard, and a raptor's plucking post, feathers not identified on the day, turned out to be one of these two. Skylarks *Alauda arvensis* were singing, and particularly noticed as the thunderstorm approached, singing clearly between the claps of thunder.

Botanically the main target species was dwarf birch *Betula nana*, BSBI locally rare "possibly introduced and scarce at this altitude". Copied from ENHS Journal excursion note 04.06.11: "The then (2011) new Atlas of British & Irish Flora revealed this as the only site in Scotland south of the Highland Boundary fault." Sadly not found, despite a brave attempt by Neville in torrential rain. Aquatic plants found were bottle sedge *Carex rostrata*, being one of 10 sedges, and bulrush or reedmace *Typha latifolia*, marsh pennywort *Hydrocotyle vulgaris*, marsh violet *Viola palustris* and marsh cinquefoil *Cammarum palustre*. Broad-leaved helleborine *Epipactis helleborine* was doing well, but as with the others, not yet in flower.

Fungi found were dung roundhead *Stropharia semiglobata* and bog bell *Galerina paludosa*. David found a liverwort, greater whipwort *Bazzania trilobata*, a classic plant of oak woods in western Britain; a new liverwort for him.

Some of us had a brief glimpse through the vertical rain, of roe deer *Capreolus capreolus*. The excursion ended early at 3.00pm with a lot of very wet and bedraggled but happy Nats.

Joanie McNaughton

Blairhall and Balgownie NT 000 883

7th June 2017, Leader: Wilma Harper

Eight of us started out on this walk on the only sunny day that week – yesterday there was 82mm of rain recorded in Edinburgh.

The walk started after lunch which some took across the road from the start and David Adamson spotted a *bombus* species, possibly a tree bumble bee *Bombus hypnorum*, sticking close to a crack in the stone wall (nest) which he watched over a considerable time.

We then proceeded on to the site, which was mainly reclaimed industrial ground that boasted a great variety of species including spiked shield bug *Picromerus bidens*, garden bumblebee *Bombus hortorum* (probably), carder bee *Bombus pascuorum*, green-veined white *Pieris napi*, male/female orange tip *Anthocharis cardamines*, foxglove *Digitalis purpurea*, hawkweed *Hieracium* sp., teasel *Dipsacus fullonum*, night shade (probably woody *Solanum dulcamara*), valerian *Valeriana officinalis*, bird's-foot trefoil *Lotus corniculatus*, sea buckthorn *Hyppophae rhamnoides*, water-plantain *Alisma* sp., red/white clover *Trifolium pretense/repens*, lesser spearwort *Ranunculus flammula*, woundwort *Stachys* sp. and yellow sedge *Carex viridula*.

There was a change of scene when we emerged onto a wetland reserve area with bird song, red damselflies *Pyrrosoma nymphula*, northern marsh orchid *Dactylorhiza purpurella* and common spotted orchid *Dactylorhiza fuchsia*. Whilst plant hunting, Erica and Wilma disturbed a young roe deer *Capreolus capreolus*, which came bursting out of a bush looking almost as startled as Wilma. Birds included song thrush *Turdus philomelos*, swallow *Hirundo rustica* and buzzard *Buteo buteo*. There were common blue *Polyommatus icarus*, peacock *Aglaia io* and red admiral *Vanessa atalanta* butterflies. Plants included birds-foot trefoil *Lotus corniculatus*, broad leaved helleborine *Epipactis helleborine* and a toadflax *Linaria* sp. A common frog *Rana temporaria* made a cameo appearance. In Balgownie Woods we found oyster mushrooms *Pleurotus ostreatus*, heath speedwell *Veronica officinalis*, slender St. John's-wort *Hypericum pulchrum*, meadow foxtail *Alopecurus pratensis*, soldier beetle *Cantharis rustica* and tree creeper *Certhia familiaris*. Jean Long claimed the "find of the day" with a buff-tip moth *Phalera bucephala*, resembling a snapped off birch twig.

Ian Schoolar

Baddinsgill NT 141 521

10th June 2017, Leader: David Adamson

This walk of six-and-a-half miles was John Palfery's idea. John had moved house on the day before the outing so I deputised for him. Five of us met at the roadside by West Linton Golf Club and set out on the metalled track towards Baddinsgill, pausing to speak with a rare breeds' enthusiast who was about to feed his very clean but impatient Tamworth pigs. He also had a large flock of Hebridean sheep, sharing the next field with a Clydesdale horse.

Apart from a distant peregrine *Falcon peregrinus* and some lapwings *Vanellus vanellus*, there was little to note of natural history interest until we came upon a damp patch containing marsh lousewort *Pedicularis palustris* and many common spotted orchids *Dactylorhiza fuchsii* about to flower. Shortly after this we entered what had been community woodland, but which now seems a bit neglected. Trees were covered in lichens, including *Bryoria fuscescens* and *Platismatia glauca*. On the dry-stane dyke were the very large lichen apothecia of *Parmelia saxatilis*. Erica and Sarah found ladybird larvae, probably 7-spots, and Vlad picked up a violet click beetle *Ctenicera cuprea* which was blown away instead of "clicking" to escape. Many of the trees had burst the wrap-around plastic tubes in which they had been planted, and several tubes contained dead trees.

We followed the Tweed Trails signs through the wood. These brought us to the Baddinsgill Burn, where the plants indicated slightly more base-rich conditions. This was the only place where we found thyme *Thymus polytrichus*, quaking grass *Briza media* and flea sedge *Carex pulicaris*, one of

eleven sedges seen during the walk. A liverwort *Jungermannia atrovirens* was growing on water-splashed stones by the burn. Peter pointed out the day's only heron flying downstream. The Tweed Trail then took us below Baddingsill Farm and across the Lyne Water to the old drove road above its east bank. One plant of heath spotted orchid *Dactylorhiza maculata* was in flower, and Erica, appropriately, found bell heather *Erica cinerea*. We then passed some youngsters who were walking for ten kilometres as part of their Duke of Edinburgh Award Scheme activities. After struggling to open some gates on the track near Stoneypath Farm we joined the old Roman Road to Carlops at the Siller Holes. These are hollows and mounds caused by mediaeval mining for silver and lead. Growing by the roadside was downy oat grass *Helictotrichon pubescens*. The Siller Holes are not easily accessed, so we continued back towards our starting point via Lynedale. On the way we passed a patch of raspberry *Rubus idaeus* that had attracted four bumblebee species, being *Bombus monticola*, *B. lucorum*, *B. pratorum* and *B. pascuorum*, and saw yet more rare breed pigs. The walk took some four hours and most of us went to Pentland Plants for much appreciated refreshments.

David Adamson

Addiewell Scottish Wildlife Trust Reserve

20th June 2017, Leader: Kathie Buckner

There was a good turnout (12) for the excursion to Addiewell Scottish Wildlife Trust (SWT) reserve. Parking was a bit limited but we managed to squeeze into the small space available. Our numbers were swelled by the inclusion of Gavin Stewart who, due to his involvement in the management of the reserve, was able to give us a potted history of the site. The Addiewell oil-shale works were set up in 1866, and at the time were the biggest oil-shale works in the world with about 3.5 million litres of oil produced a year. The works, which occupied 28.3 ha of land, employed 1500 workers and closed in 1956. During the 1970s and 1980s many bings were levelled and the shale spoil used for road building. This still continues – shale from Niddry Bing was recently used in building the access roads to the Queensferry Crossing. Addiewell bing became the property of what is now West Lothian Council and approximately 30 years ago the SWT came to an arrangement with the Council for the reserve to be established. Active management of invasive species by SWT has opened up the site and it is now home to many flora and fauna.

David Adamson identified many species including two beetles *Judiola* sp. on hogweed *Heracleum sphondylium* and some slim metallic green beetles, abundant on buttercups, which may have been *Oedemera lurida* or *O. virescens*. These may be under-recorded in Scotland and are perhaps even a bit rare. There were five species of bumblebee: white-tailed *Bombus lucorum*, forest cuckoo *Bombus sylvestris*, common carder *Bombus pascuorum*, early *Bombus pratorum* and red-tailed *Bombus lapidarius*.

Moths: ghost *Hepialus humuli thulensis*, common swift *Hepialus lupulinus* and silver-y *Autographa gamma*). Butterflies: ringlets *Aphantopus hyperantus*, red admirals *Vanessa atalanta*, one orange tip *Anthocharis cardamines* and a white of some description. Damselflies, probably females of the common blue *Enallagma cyathigerum*, were also seen.

We heard or saw willow warblers *Phylloscopus trochilus*, chiffchaffs *P. collybita*, blackcaps *Sylvia atricapilla* and sedge warblers *Acrocephalus schoenobaenus*. Gavin also saw a kingfisher *Alcedo atthis*.

Orchids seen were common spotted *Dactylorhiza fuchsii*, twayblade *Neottia ovalis* and broad-leaved helleborine *Epipactis helleborine*.

The only mosses seen were on trees: *Ulota phyllantha* and *Cryphaea heteromalla*. The latter cannot tolerate the acidity of sulphur dioxide and has apparently made a comeback since coal ceased to be used as fuel.

Kathy Buckner - With thanks to David Adamson for the comprehensive species list and Gavin Stewart for guiding us around the reserve.

Birnie and Gaddon Lochs NO 283 125

24th June 2017, Leader: Ptolemy McKinnon

The retreat of the glaciers at the end of the last ice age left many lochs and wetland areas in the Howe of Fife. Over the centuries most were drained to provide productive agricultural land. Then the late twentieth century brought quarrying for sand and gravel to the area. As deep pits reached below the water table two new lochs were formed.

When quarrying ceased, first Birnie in 1990 and then Gaddon in 1996 were sold to Fife Council for £1. The sites were landscaped, thousands of trees planted and plants collected from local ponds and lochs were established around the edges of the lochs.

For the recce earlier in the week we had sunshine, very little wind and lots of flying insects.

Unfortunately when we met on Saturday the day was dull and breezy. After a brief introduction from Wilma we set out to walk round Gaddon Loch, noting water forget-me-not *Myosotis scorpiodes* by the water. Further on we came upon a stand of fool's parsley *Aethusa cynapium* by the path and some red campion *Silene dioica* infected by the purple anther smut *Microbotryum violaceum* agg.

On the whin *Ulex europaeus* by the side of the path there was the plant specific fungus *Polyporus tuberaster* and nearby a little ball of moss, the beautiful nest of a long-tailed tit *Aegithalos caedatus* but no sign of the bird. When quarrying ceased the nest sites used for years by sand martins were lost and special barrels installed to replace them. Although we saw swallow *Hirundo rustica* and sand martin *Riparia riparia* from the first hide there was no evidence of the barrels being used. Other birds recorded during the day included swift *Apus apus*, common chiffchaff *Phylloscopus collybita*, blackcap *Sylvia atricapilla*, whitethroat *S. communis*, willow warbler *Phylloscopus trochilus*, garden warbler *S. borin* and sedge warbler *Acrocephalus schoenobaenus*. Near the end of the loch the path follows a strip of woodland which includes a small orchard. There for the first time the photographers had a chance to chase a butterfly. It was only a ringlet *Aphantopus hyperantus*, one of the few species happy to fly in dull weather. Photos were also taken of a rhinoceros beetle and a red and black frog hopper.

We found a reasonably sheltered lunch spot on a bank surrounded by masses of the less common yellow form of fox-and-cubs *Pilosella caespitosa*, a garden escape which has colonised the area. Next we came to an open patch where the free draining soil was home to a number of interesting plants including small cudweed *Filago minima*, trailing St John's wort *Hypericum humifusum* and knotted clover *Trifolium striatum*. This area of rough ground was former sand quarry workings, now being colonised naturally and provided an interesting contrast to the restored area round the lochs.

Having almost completed our circuit we came on one of the most interesting finds of the day. On a wooden fence close to the edge of the loch was a damselfly, just newly emerged, with the exuvia beside it. Some of us extended the outing with a walk round Gaddon. We found robin's pincushion *Diplolepis rosae* on rose and a red admiral *Vanessa atalanta* on bramble.

After a pleasant outing we adjourned to Tannochbrae Tearoom for tea and cakes.

Lyn Blades

Straiton Pond NT 276 666

29th June 2017, Leader: Jean Long

A yellow warning for rain was issued; it rained and we got very wet. Seven of us took part in this adventure around another post-industrial site on the outskirts of Edinburgh alongside Straiton Retail Park. The pond, known as Dirty Dick's in the 1960s, is a retired blue clay pit now managed by Midlothian Council. The clay was extracted for brick-making.

After a brief visit to a field margin with tall vegetation, we entered the Local Nature Reserve. Early on Vladimir Krivtsov pointed out the two lines on *Camptogramma bilineata*, commonly known as yellow shell moths, which were braving the weather. The reserve had plants typical of a reclaimed

site: globe thistle *Echinops* sp., field pansy *Viola arvensis*, and red bartsia *Odontites verna*. Less commonly wild basil *Clinopodium vulgare*. Erica Bright had recently discovered ladybird larvae and it was on the ubiquitous weld *Reseda luteola* that she discovered some 7-spot ladybird *Coccinella septempunctata* larvae.

There were a few bedraggled bumblebees but we only confidently identified a *Bombus pascuorum*. On the pond the cygnet count had dropped from eight to seven and the parents brought them over for an inspection. Wilma Harper pointed out that there seemed to be swallows *Hirundo rustica* in the trees on the opposite bank; in the rain they were making short forays out across the water to catch insects.

At the beginning of the walk we had come across a very large earthworm and Jean used this opportunity to share her knowledge about the clitellum and how earthworms move. At the end we came across many more worms on the footpath. It was widely believed that they avoid drowning by leaving their burrows; however, another theory is that they migrate to mate when the ground is wet. Whatever the reason we moved some into the vegetation out of the way of feet and birds beak's. The reserve is easily accessible by public transport and close to food and drink outlets. It looks like it should be a great fair-weather habitat. Perhaps we'll go again.

Sarah Adamson

East Lammermuir Deans NT 715 703

July 1st 2017, Leader: Leslie Fairweather

The group of 12 met at Aikengall, along roads covered in standing water with wind turbine loops making life difficult – Neville kindly rounded people up.

Around the parking area, sheep pens and buildings there were house martins *Delichon urbica*, swallows *Hirundo rustica* and sand martins *Riparia riparia* all flexing their wings after the previous day's torrential rain.

The Community Wind Power track was followed to the sub-station and then the moorland path was followed to the edge of the Fairy Castle Glen. With care, the group slithered gently into the glen where there was shelter and sunshine along with the fast flowing, subsiding torrent of water. The geology of the area was explained by Vladimir, with the help of Mary Clarkson's book, explaining how the red sandstone conglomerate was eroded over the years to give the spires and turrets of the fairy castles. The sun brought out the bees, butterflies and beetles amongst the wild flowers, common rock-rose *Helianthemum nummularium* and thyme *Thymus polytrichus* giving splashes of colour amongst the other calcicoles.

The first northern brown argus *Aricia Artaxerxes* butterfly was put up by a common blue *Polyommatus icarus* and admired by most of the group. Steuart got some good photographs which he said would be on Facebook that evening. This was followed by green-veined whites *Pieris napi*, meadow browns *Maniola jurtina*, ringlets *Aphantopus hyperantus*, a wall brown *Lasiommata megera* (identified by Neville, a first in this reserve for me), small heaths *Coenonympha pamphilus*, red admirals *Vanessa atalanta* and a dark green fritillary *Argynnis aglaja*.

Moths included silver ground carpet *Xanthorhoe montanata montanata*, yellow shell *Camptogramma bilineata bilineata*, silver-y *Autographa gamma*, large yellow underwing *Noctua pronuba* (drinking nectar with a long proboscis), as well as several micro moths.

David pointed out hoverflies, wasps and bumble bees with a queen vestal cuckoo bumblebee *Pysitherus vestalis*, giving a good display as it crawled slowly over the thyme.

A raven *Corvus corvus* flew over, along with several mistle thrushes *Turdus viscivorus*, as did linnets *Acanthis cannabina*, wrens *Troglodytes troglodytes* and blackbirds *T. merula*.

The 'Dolorite Dyke' again needed explanations from Vladimir and the book - hard basalt on one side and baked conglomerate on the other. The whole group ended up looking at it in detail which opened up a world of ferns, such as brittle bladder *Cystopteris fragilis*, lemon-scented *Oreopteris limbosperma* and soft shield fern *Polystichum setiferum*. On the dyke itself were mosses, thyme

Thymus polytrichus, maidenhair spleenwort *Asplenium trichomanes*, wall speedwell *Veronica arvensis* (very apt) and many others.

Some of the group had seen the stone bramble *Rubus saxatilis* but it was decided to look for the large patch at the head of the glen – this had disappeared over the years, so it meant a hard climb back out of the glen which luckily, everyone achieved – a feisty and determined group. Skylarks *Alauda arvensis* serenaded the walkers on the downhill journey back to the cars, and with no refreshment place on the horizon, everyone had to leave the magical glen and return to civilisation.

Lesley Fairweather

Harlaw Circuit

5th July 2017, Leader: David Adamson

This walk followed the same route as that on 22nd July 2015. We were pleased to meet Daniel and Tabitha, now aged 4 and 3, who had been on that previous visit to Harlaw. Our party of 14 assembled at Harlaw Wildlife Garden and set out along the straight path west towards Threipmuir. The recent cool, wet weather may have been responsible for the shortage of butterflies, ringlets excepted, but we did find many 5-spot burnet moths *Zygaena trifolii* on the way to Black Springs in the same area as two years ago. Jean had collected some fungi among the conifers, and Vladimir was able to name most of them. While the water level in Harlaw Reservoir remained low, Threipmuir had re-filled to the extent that water now completely covered the wide, stony beach that we had strolled along only two weeks previously.

The causeway to Black Hill had recently been resurfaced, and plants are re-colonising its slopes. Some of us paused there to allow others to catch up. While waiting, we watched dabchicks and a family of mute swans on the still waters of Black Springs, pondweed covering much of the water surface with its pink flowers. Daniel took the opportunity to empty the water from his boots and wring out his socks.

On a sitka spruce *Picea sitchensis* by the tree-lined path back to Harlaw were unusual galls. At first sight they resembled slime moulds, but when touched were found to be firm and solid. They appear to have been caused by one of the pineapple gall adelgids *Adelges* sp. and were unfamiliar to most of us.

After Tabitha and Daniel had spent most of their remaining energy clambering on some fallen logs beside Harlaw Reservoir we finished the outing by looking at a variety of bumblebees feeding on raspberry flowers opposite the visitor centre. Today we found at least eight species, including *Bombus monticola*, which is relatively common in the Pentlands, and males of one of the cuckoo species. Vladimir identified a beetle found on the path as *Pterostichus nigrata*, and the only adult ladybirds seen were 7-spots *Coccinella septempunctata*.

David Adamson

Auchtermuchty Common NO 236 134

8th July 2017, Leader: Clare Reaney

King James V gave the common to the Burgh of Auchtermuchty in 1517. Since 1973 it has been owned by a charity, The MacDuff Trust. The Secretary, Clare Reaney, explained that the trust took over direct responsibility for the management of the common from the council, and was fortunate to receive a substantial grant from the Heritage Lottery Fund and other bodies in 2011. This grant, which has now been fully used up, enabled the trust to carry out work aimed at securing the long-term future of its 30 acres of unimproved grassland. This included secure fencing so that a flock of sheep belonging to the SWT could graze the common and prevent bushes from replacing the meadowland. The sheep were selective feeders, and tended to eat the very plants that the trust was

trying to preserve. Grazing by ponies has been found to be effective in reducing coarse grasses and allowing the more colourful meadow plants to recover.

Since our visit in 2011 wild thyme *Thymus polytrichus* and dark green fritillary butterflies *Argynnis aglaja* seem to have disappeared, but we found many of the plants and insects seen on that outing in July 2011. Robin's pincushions *Diplolepis rosae* were also re-found, as were a six-spot burnet moth *Zygaena filipendulae stephensi* and a couple of shaded broad-bars *Scotopteryx chenopodiata*. We saw a common blue butterfly *Polyommatus icarus*, but the most obvious insects were probably the common green grasshoppers *Omocestus viridulus*, which were both seen and heard, the common carder bees *Bombus pascuorum* and the abundant seven-spot ladybirds *Coccinella septempunctata*. Field scabious *Knautia arvensis* and lady's bedstraw *Galium verum* were prominent in the drier parts of the common, and we were shown two small patches of rock-rose *Helianthemum nummularium*, neither supporting any rare butterflies at present. Although rarely seen, we often heard yellowhammers *Emberiza citrinella* singing from the surrounding hawthorn bushes. Our numbers were depleted by a number of departures at lunchtime, including Clare and her two colleagues. Afterwards we retraced our steps to the car park and crossed the road to follow the board-walk and path in Glassert's Den, finding much giant or Pyrenean valerian *Valeriana pyrenaica* which was just past flowering, as well as the leaves of sweet violet *Viola odorata*. We stopped for tea at the Tannochbrae Tearoom in Auchtermuchty, where we are becoming Saturday afternoon regulars. Tea was partaken to a background of Jimmy Shand music, turned louder for Cameron's benefit. Even the best tearooms have their drawbacks.

David Adamson

Loanhead Coalstore NT 281 653

12th July 2017, Leader: Pat Chaney

We walked along the disused railway, now a cycle path, to the site of the Bilston Glen Coalstore, which was decommissioned in 1985. This followed the miners' strike during which the mine flooded and was deemed too expensive to salvage. Then we went over the spoil heap to the remaining fragment of the Bilston Gorge. This was once a site of international geological significance because of the Bone Bed Limestone deposits, and was awarded SSSI status in 1956. However, in spite of this and local and national objections it was used by the then National Coal Board to dump the spoil from the Bilston Mine. We returned to our starting point along the margin of Bilston Wood, which is also an SSSI.

Over 150 species were recorded on the day and the list was forwarded to TWIC. A number of these were first records. The first was wood millet *Milium effusum*, on the cycle path, which had been recorded in another compartment of the site but this was the first record from here.

On the coalstore we found: squirrel-tail fescue *Vulpia bromoides*, common wintergreen *Pyrola minor*, common centaury *Centaurium erythraea*, marsh cudweed *Gnaphalium uliginosum*, sand spurrey *Spergularia rubra*, heath speedwell *Veronica officinalis*, small cudweed *Filago minima* and common cudweed *Filago vulgaris*. Of the fungi we found: clustered tough-shank *Gymnopus confluens*, alder tongue *Taphrina alni*, russula species *Russula ionochlora* and *R. velenovskii*, geranium-scented russula *R. fellea*, brown rollrim *Paxillus involutus*, red cracking bolete *Xerocomus chrysenteron*, fairy ring champignon *Marasmius oreades* and the bryophytes, white earwort *Diplophyllum albicans* and southern crestwort *Lophocolea semiteres*. We also found the following lichens: golden shield lichen *Xanthoria parietina*, two cup lichens *Cladonia diversa* and *Cladonia ramulosa* and a reindeer lichen *Cladonia portentosa*.

On the rim of the gorge we found: cut-leaved crane's-bill *Geranium dissectum*, wood vetch *Vicia sylvatica*, and down in the gorge there was a good colony of hard fern *Blechnum spicant*. In the gorge we caught a glimpse of a jay *Garrulus glandarius* and a little later a tawny owl *Strix aluco*. The following bees were recorded on the coalstore: garden bumblebee *Bombus hortorum*, red-tailed

bumblebee *B. lapidarius*, common carder bumblebee *B. pascuorum*, field cuckoo bumblebee *B. campestris* and cuckoo bumblebee *B. vestalis*.

We found three first record butterflies: meadow brown *Maniola jurtina*, common blue *Polyommatus icarus* and red admiral *Vanessa atalanta* and two moths, clouded border *Lomaspilis marginata* and five cinnabar moths *Tyria jacobaeae*.

Pat Chaney

Lammerloch near Longyester & Bolton Woods near Gifford NT 509 643 & NT 501 682
15th July 2017, Leader: Douglas McKean

The weather lately has been punctuated by extensive drizzle and showers, and today was no exception up until noon.

We started out from East Latch at the eastern end of a circular right-of-way. Mr Norman Galbraith had given us permission to park in his property for which we are very grateful. We set off up the muddy steep track passing through the cattle byres. An electric fence prevented us from straying from the path and one of the party accidentally touched the wire to discover it was live. He had been examining lichens on the fence post. We distantly passed by the workings of Tillicoultry Gravel Quarry which appeared closed at the weekend. We could see two large settling ponds in the distance. This site in recent times has hosted breeding little ringed plovers *Charadrius dubius* but access is denied on health and safety grounds. We arrived at the first of three ponds, well away from the quarry which was well vegetated around the margins. The dominant plants were water horsetail *Equisetum fluviatile*, smooth rush *J. effusus*, floating pondweed *Potamogeton natans*, and also sand martins *Riparia riparia* from the sand quarry. The next pond was choked with blanket weed where a pair of mute swans *Cygnus olor* was dining. A female tufted duck *Aythya fuligula* led her seven fluffy ducklings through the thick algal scum to open water. The teal *Anas crecca* seen the previous week had disappeared. We moved on to a third pond which had water cress *Nasturtium officinale* (short fat pods), water horsetail *E. fluviatile*, floating pondweed *P. natans* and forget-me-nots *Myosotis sp.*

The main pond had an attractive marsh behind it with lots of grey willows *S. cinerea ssp. oleifolia* and the fringes with rushes a-plenty but not easily accessible. There were lots of water horsetail and floating pondweed and a small colony of amphibious bistort *Persicaria amphibia*. The dam of this small reservoir was composed of large slabs of rock set at a gentle angle, colonised by bird's-foot trefoil *Lotus corniculatus*, common thyme *T. polytrichus sp. britannicus*, common mouse-ear *Pilosella officinalis*, etc. A pair of dabchicks *Tachybaptus ruficollis* and moorhens *Gallinula chloropus* were also seen. This was our picnic site five years ago when we saw a single adder *Vipera berus* and an osprey *Pandion haliaetus* was passing overhead. Towards the final stretch of water, Lammerloch, we met up with Marion Moir who had just joined our party. This is the largest of the water bodies which lies in the highest position in a steep-sided valley and is owned by the Water Board. An aquatic moss *Fontinalis antipyretica* and alternate-leaved water-milfoil *Myriophyllum alternifolium*, were noted at the dam. A path just outside the fence led to the far end where we picnicked in a sheltered spot by the dam. Most of the area outside the reservoir enclosure was heavily grazed and the cattle/sheep dung had caused eutrication of at least one pond with blanket weed obscuring much of the surface. Lots of large heath groundsel *Senecio sylvatica*, chickweed *Stellaria media* and knotweed *Polygonum aviculare* were found in the well grazed area. I am surprised that the latter herb seems to be avoided by rabbits and other grazers yet humans and cage birds can eat it. On our return, near the cattle sheds, a single plant of hemlock *Conium maculatum*, the apocryphal poison of Socrates was seen - an odd poisonous plant to be growing where animals often mingle.

On the opposite side of the path from the ponds were steep rocky hillsides of wavy-hair grass *Deschampsia flexuosa*, gorse *Ulex europaeus*, bracken *Pteridium aquilinum* and wood sage *Teucrium scorodonia*. A small quarry, long since defunct had a few mullein plants *Verbascum*

thapsus and a handsome large opium poppy *Papaver somniferum*. A fuller list of plants for this area can be found in the journal account of five years ago – largely provided by Jackie Muscott. As usual when visiting beauty spots each visit conjures up new species depending on season and weather. On our first visit the highlights were osprey, adder and a plethora of butterflies and other invertebrates. A spring recce gave a greyhen *Tetrao tetrix* but possibly confused with a grey partridge *Perdix perdix* which was seen on a later visit. A local landowner apparently tried to reintroduce blackcock. From the highest vantage point above Lammerloch and overlooking the large gravel workings, evidence of ancient forts and settlements could be seen and were featured on O.S. maps. We later visited the well-known orchid site at Bolton crossroads where we viewed colonies of creeping lady's-tresses *Goodyera repens* and common wintergreen *Pyrola minor*. The bird's-nest orchid *Neottia nidus-avis* and common twayblade *Listera ovata* were seen on either side of the road. The wood was a nice mixture of scots pine *Pinus sylvestris*, common beech *Fagus sylvatica*, oak *Quercus sp.* and birch *Betula sp.* The pines were well spaced and allowed a reasonable ground cover of mosses and other heathy plants. Interesting insects in the main body of the large pine wood included a red and black long-horned beetle *Leptura quadrifasciata*, several male cuckoo bumblebees *Bombus vestalis* and *B. sylvestris* feeding on spear thistle. There was also a male palmate newt *Lissotriton helveticus* in a ditch. I am grateful to David and Sarah Adamson for information about invertebrates, Stuart Maxwell for plant and animal additions (on a recce), Vladimir Krivtsov for fungal contributions and Lyn Blades for organisational help and finally to Norman Galbraith for permission and parking spaces and thanks to anyone whom I may have overlooked.

Douglas McKean

Milkhall Pond SWT Reserve NT 242 572

19th July 2017, Leader: Neville Crowther

Ten of us gathered at the entrance to a small man-made reserve of which Neville has been convenor for around twenty years. Some railway cottages, built for the long-defunct Penicuik to Peebles line, face the main pond, which was originally created to provide exceptionally clean water to the Penicuik paper mills. A few small pools have been created since the pond was acquired by the SWT, and trees have been planted in the four acres of wetland.

After an introductory talk we walked to the east end of the pond where Nev. showed some of us his album of wildlife photos taken on the reserve over many years. Little grebes *Tachybaptus ruficollis*, with stripe-faced chicks, 'whinneyed' in the sedge beds, and flying insects in the grey light seemed confined to nectaring on umbels of hogweed *Heracleum sphondylium* and angelica *Angelica sylvestris*. Someone with keen eyesight spotted the striking black and yellow ichneumon wasp *Amblyteles armatorius*. However it can be difficult to attend to even the best of photos when in a nature reserve at the height of summer, which is my excuse for wandering away to explore the area beyond the pond and pools. The stretch of old railway that crosses the Lead Burn is outside the reserve but benefits from the calcareous content of the slag bed to produce a long carpet of wildflower meadow. Here I found a male gypsy cuckoo bumblebee *Bombus bohemicus* on lesser knapweed *Centaurea nigra*. Within the reserve were four other species, of which *Bombus lucorum* and *B. pratorum* were the most numerous, *B. pascuorum* relatively scarce and *B. sylvestris* represented by a single queen.

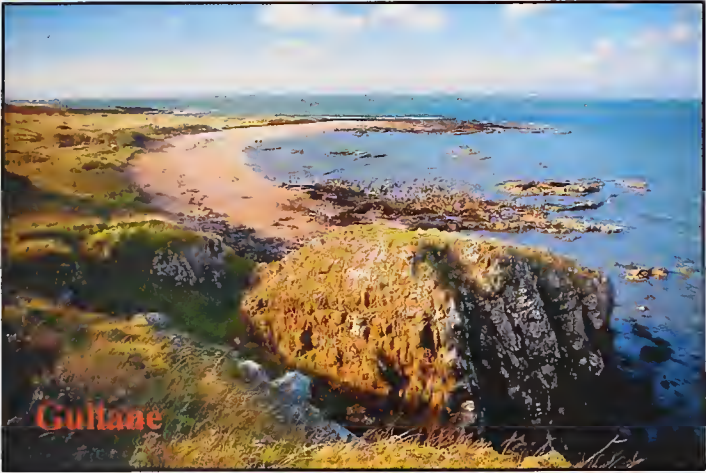
The main interest was in the aquatic invertebrates, and Nev. had thoughtfully provided nets and trays so that we could catch, examine and release some of the inhabitants of the pond and pools. Small three-spine sticklebacks *Gasterosteus aculeatus* and various water bugs and beetles appeared to be common, and at least one caddis fly was among the finds. Vlad keyed out a water beetle as *Ilybius fuliginosus* and found it to be a species not previously recorded on the reserve. He was also pleased to discover a keeled snail *Planorbis carinatus*, again not previously known here. Brown beetles mating on *Sparganium* leaves were a species of *Donacia*.



Gilmerton House



Tynninghame



Gullane



Loch Ardinning



Hedderwick

2017 IN PICTURES



Cockenzie & Port Seton



Aberlady



Spear thistle



Eyed ladybird



Bullfinch



Leotia lubrica - jelly babies



Painted lady



Leotia hithoides



Rowan



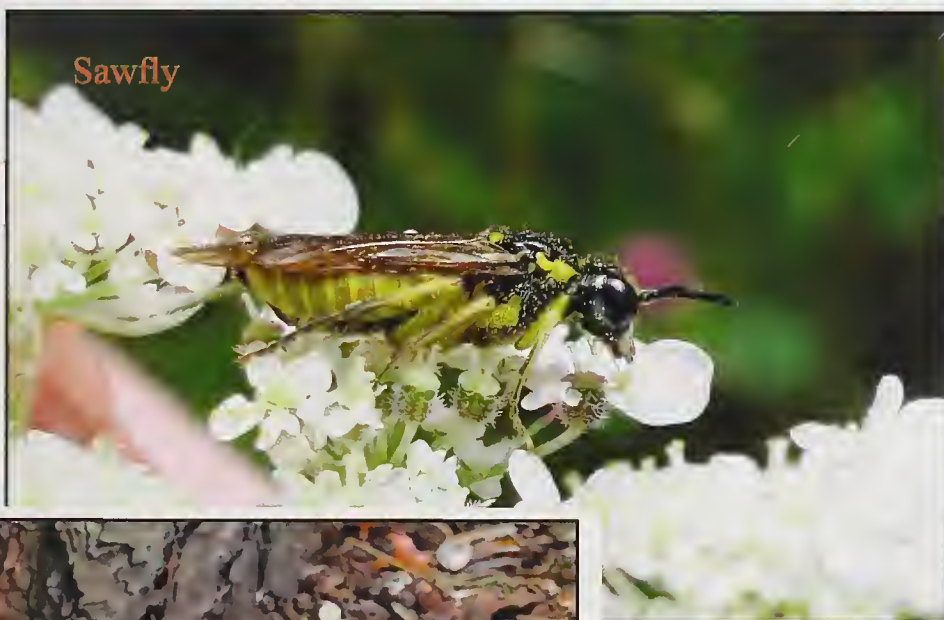
Members' Night time capsule



Lagularia sp.



Crash we Hohen



Sawfly



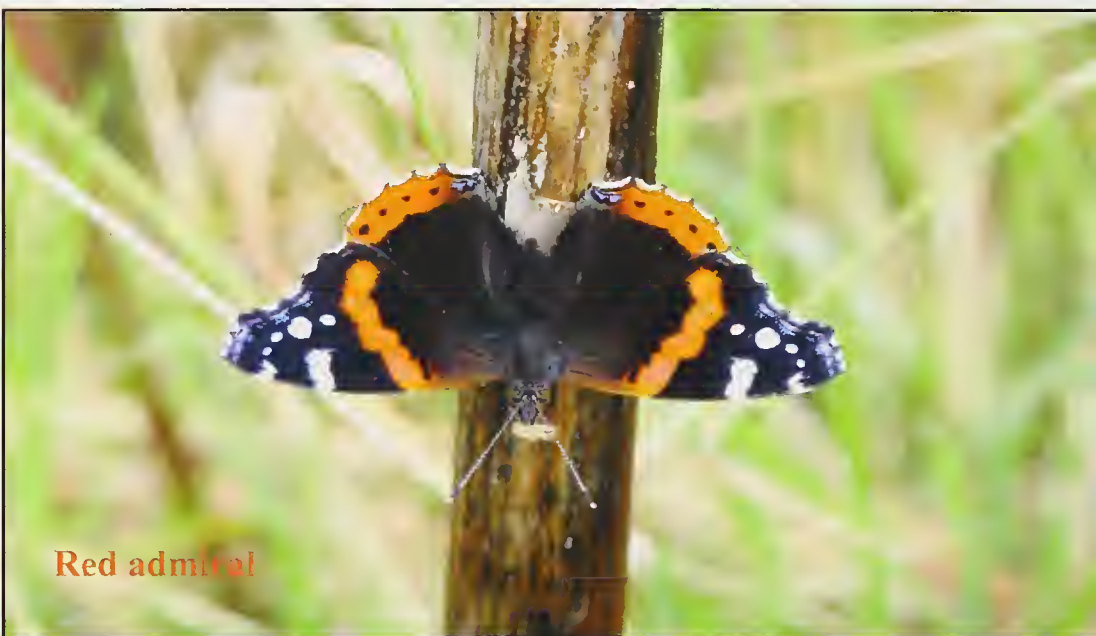
Red legged shield bug nymph



Common darter



Starling



Red admiral



Scale insect



Common frog



Peltigera membranacea



Green carpet



Whooper swans

The floating leaves of three aquatic plants, broad-leaved pondweed *Potamogeton natans*, amphibious bistort *Persicaria amphibia* and spiked water milfoil *Myriophyllum spicatum* produced a sea of pink and white flowering spikes. While searching the pond-side vegetation, Dorothy found a gold spot moth *Plusia festucae*, a couple of snouts *Hypena proboscidalis* and a brown china mark moth *Elophila nymphaeata*; the latter spends its larval stage under water in a case made partly from leaf debris.

The rain had held off but the midges had not, and it was the constant attention from the midges that eventually persuaded us to call it a day. Thanks to Neville for an excellent afternoon.

David Adamson (with help from Neville Crowther and Vladimir Krivtsov)

Aberlady Bay NT 471 805

22nd July 2017, Leader: Richard Buckland, Butterfly Conservation

During the 1990s the late Bill Clunie usually led our annual July outing at Aberlady Bay Nature Reserve. Bill's main expertise and interest were ornithological, and in his report for 24th July 1999 the only natural history observations were about the birds seen on that day. Bill comments that "there was nothing of note on or around the loch" and "nothing of note was seen on the way back". Our joint outing with Butterfly Conservation could scarcely have taken place in weather less favourable to observing butterflies. The skies were unrelentingly grey, and the cool east wind brought several rain showers. A photograph of our cagoule-clad group under these dark skies could have been mistaken for a winter coastal outing. Despite the weather we did find some inactive butterflies and a few bedraggled bumblebees. For the record we found at least three common blues *Polyommatus icarus*, three small heaths *Coenonympha pamphilis*, some meadow browns *Maniola jurtina* and a few 6-spot burnet moths *Zygaena filipendulae stephensi*. Thankfully, unlike insects, plants cannot disappear when it rains, so we substituted botany for entomology and spent much of our time on the outward walk admiring Aberlady's very special flora. By the time we stopped for lunch in the shelter of the dunes we had seen at least five kinds of orchid. All day, much of our success in finding plants was due to Stuart Maxwell, who knew where to search for some of the rarer species. By the time that the 3 from Butterfly Conservation left us after lunch, our original party of 16 had dwindled to just 9. Stuart then became our unofficial leader and led us through the dune slacks to find autumn gentian *Gentianella amarella* just coming into flower, and to large patches of frog orchid *Dactylorhiza viridis* (formerly *Coeloglossum viride*). Jean caught a very wet and torpid bumblebee that she assumed would turn out to be a common species. However the deep yellow flashes above the white, pointed tail identified it as a queen southern cuckoo bumblebee *Bombus vestalis*, a relative newcomer to Scotland.

When we reached a wide path signposted "Aberlady" we turned away from the dunes and began our journey back to the timber bridge. Further on, Stuart and Vlad called us over to a pool filled with stonewort *Chara hispida* or *virgata*, above which were the yellow flowers of the rare insectivorous plant, greater bladderwort *Utricularia vulgaris*. Growing around the pool were other special plants of calcareous flushes, such as lesser clubmoss *Selaginella selaginoides* and butterwort *Pinguicula vulgaris*, some bog pimpernel *Anagallis tenella* and an abundance of grass of Parnassus *Parnassia palustris*. Our presence unnerved two snipe *Gallinago gallinago* which eventually broke cover and fled with their characteristic zig-zag flight.

Near the end of our walk Vlad was pleased to have close-up views of reed buntings *Emberiza schoeniclus*. Otherwise there was nothing of note.

David Adamson

Craigentinny and Meadows Yard Local Nature Reserve NT 293 753

27th July 2017, Leader: Committee

Meadows Yard LNR is owned by the City of Edinburgh Council and was designated a local nature reserve in 2002. Under the National Parks and Access to the Countryside Act 1949 the local council, in consultation with Scottish Natural Heritage, can declare local nature reserves in their area.

Originally many LNRs were set up to protect sites with important natural heritage interests but at the start of this century LNRs were being set up nearer to where people lived. This was to encourage local people to have a closer connection with nature and to encourage recreation and relaxation, although nature conservation was still an important consideration.

Craigentinny, the area where Meadows Yard is situated, has an interesting history. The name itself has a disputed meaning. It seems to originate from Gaelic but could be either from the Gaelic for hill of the fox or hill of fire. In the late 18th/early 19th century Craigentinny Estate was owned by William Henry Miller of Craigentinny House (now a council community centre) famous for being an MP and for being buried in the so called 'Craigentinny Marbles', an over the top mausoleum built by prominent Scottish architect David Rhind and decorated with bas reliefs by Alfred Gatley, showing biblical scenes. The mausoleum was situated in fields on the estate but is now totally surrounded by housing on Craigentinny Avenue.

In their excellent book *The Firth of Forth – an environmental history*, T.C. Smout and M. Stewart tell how in 1847 the area of Craigentinny consisted of vast irrigation meadows supposedly filtering sewage from Edinburgh before it went into the Firth. These meadows produced grass which was cut and fed to cows in urban dairies across the city. A disgusting smell hung over the whole area and, according to the authors, the sewage leaving the meadows and flowing into the Firth was hardly better than when it arrived there.

By 1922 the urban dairies closed, the price of land rose and Craigentinny was sold for housing and a golf course. Meadows Yard became railway sidings and eventually open land and in the Eastern part, allotments. The allotments were finally abandoned and reverted to the wild, leaving Meadows Yard the quiet refuge for people and wildlife that it is today.

Ref: Smout T.C. and Stewart M, *The Firth of Forth –an environmental history*. Birlinn 2012.

The Excursion

Whilst undertaking the recce for this excursion Wilma Harper, Jean Long and myself met Graham Checkley who was surveying butterflies for the CEC Rangers. In recent months Susan Falconer, CEC Biodiversity Officer, had renewed links with the Nats and informed us that she was trapping moths at Meadows Yard. There were also members who were keen to formally record organisms under the banner of ENHS. Jean suggested that we could make the excursion a 'mini-bioblitz' and a plan was hatched. With two days' notice, a posting on Facebook and an email later, the excursion was attended by 14 members. We worked in twos and threes and explored the site, noting what we were seeing, then requesting members to send their lists to Sarah at edinburghnats@gmail.com. Currently the lists are stored and awaiting entry to recording databases.

There was an air of busyness and helping out with identification. We were particularly fortunate to have Yusef Samari with us and he was very adept at managing insects. Some of us then moved onto Seafield beside the sewage works. We looked at an area that had been an unofficial campsite last year and amongst the debris looked at plants and insects. Here Dorothy Lyle found a yellow 22-spot ladybird larva *Psyllobora vigintiduopunctata* which she was used to seeing in Ireland. However, I had never seen one in Scotland. It turned out to be a new record for the area. Above the seawall was a drift of lady's bedstraw *Galium verum* scenting the afternoon air. Here a pink grasshopper was identified as a field grasshopper *Chorthippus parallelus*, along with a common green grasshopper *Omocestus viridulus*. After a spot of birdwatching over the seawall we retreated towards our homes as the rain started. It had been a good day and it remains to be seen whether we can encourage a group of people to be responsible for recording excursion sightings.

Sarah Adamson

Ellemford Bridge to Abbey St. Bathans NT 728 600

29th July 2017, Leader: Ian Schoolar

This walk started at Ellemford Bridge with 5 members. Peter Leach and I had done the recce for this walk the day before – not a good idea!

The main concern was Vlad who arrived somewhat shaken after hitting an object in the road, resulting in a cracked sump and a large pool of oil, which meant that his car was not driveable. The walk started in a classic acid woodland with Scots pine *Pinus sylvestris*, silver birch *Betula pendula*, male fern *Dryopteris filix-mas* and lady fern *Athirium filix-femina*. There were also tadpoles in the first pool on the roadway. Jean Long's ill-fortune in losing her hand lens proved fortunate – not only did she recover the lens but, in doing so, found a slow worm *Anguis fragilis*. Our outward journey followed the south side of the Whiteadder Water to Abbey St. Bathans, where we had lunch. We returned on the north side, passed through a farm with the inevitable yapping dogs and fields with sheep.

We came through a very heavy rain shower. A group of cottages

appeared before Ellemford Bridge, where Vlad was eventually able to contact a garage.

Notable species in no particular order included moths: yellow shell *Camptogramma bilineata* and dark arches *Apamea monoglypha*, fungi: clustered tough shank *Gymnopus confluens*, common rustgill *Gymnopilus penetrans* and bonnet fungus *Mycena sp*, plants: common figwort *Scrophularia nodoso* and marsh woundwort *Stachys palustris*; butterflies: ringlet *Aphantopus hyperantus* and peacock *Aglais io*, birds: long tailed tit *Aegithalos candatus*, buzzard *Buteo buteo* and sparrowhawk *Accipiter nisus*, bugs: common green capsid bug *Lygocoris pabulinus*.

A good day was had by all – except Vlad!

Ian Schoolar



Yair Haugh NT 459 324

8th August 2017, Leader, Jean Murray

We really have Wilma Harper to thank for this walk as she had found the site listed as a Coronation Meadow. Apparently, these meadows were designated by the Prince of Wales to celebrate the 60th anniversary of the Queen's Coronation, one for each county; this was Selkirkshire's.

A little research showed it could make a linear walk starting from Yair Bridge. 10 of us set out along the route, first passing Yair Farm, then on to tracks which form part of the National Cycle Network, though we saw no cyclists on the day. As always, different people stopped to look at what interested them most, but we all admired the fairy foxglove *Erinus alpinus* on a high wall and later wondered about two grey/blue conifers, unusual in an arable field. A text to Wilma who hadn't been able to join us brought the reply that they were probably *Cedrus atlantica* var. *glauca*. We found two St John's worts *Hypericum tetrapterum* and *hirsutum*, heard a cuckoo *Cuculus canorus* and saw a comma butterfly *Polygonum c-album* on rasps, and later a peacock *Aglais io*, a green veined white *Pieris napi*, a ringlet *Aphantopus hyperantus* and meadow brown *Maniola jurtina*.

A very fine longhorn beetle came next and after that it turned into the day of the insects with angelica *Angelica sylvestris* in particular playing host to a variety of sawflies. David said he has never seen so many different species in one day.

Nearer the meadow, new ponds had been made after tree felling but these were a disappointment as they were difficult to access and only yielded a lone common hawker *Aeshna juncea*. We had lunch by the River Tweed but saw no birds on the water. Information available mentioned that the meadow had many interesting plants but flowering time was over. There was a fence to cross and the party was engrossed in poking around in the bushes and undergrowth for whatever spiders, bugs and other beasties they could find, a little green spider *Araneilla cucurbitina* being particularly eye-catching, so the meadow was ignored.

The weather had been kind though we did get a little wet on the walk back. Someone caught a glimpse of two roe deer *Capreolus capreolus*. A buzzard *Buteo buteo*, great spotted woodpecker *Dendrocopos major* and nuthatch *Sitta europaea* were heard, so altogether a satisfactory outing to a place we hadn't been before.

Jean Murray

Calais Muir Woodland NT 130 868

10th August 2017 Leader: Jean Long

Calais Muir, located to the east side of Dunfermline in the Duloch area, is a long-established woodland at least 120 years old and now in Fife Council ownership. It proved to be a real “hidden gem” of a place surrounded by new housing and business development but despite these pressures and challenges it supports a very wide and diverse wildlife habitat.

Seven members started out along the aptly named “Enchanted Walk” and admired a number of lovely wood carvings near the entrance including roe deer and owls. This trail took us through the silver birch *Betula pendula* part of the woodland and birds spotted included lesser black-backed gull *Larus fuscus* and wren *Troglodytes troglodytes*. We hadn't walked very far before seeing the first of numerous fungi species of the day – sulphur tuft *Hypholoma fasciculare*, brown roll-rim *Paxillus involutus*, yellow swamp brittlegill *Russula claroflava* and common yellow russula *Russula ochroleuca*. Other fungi species spotted during the day included hoof fungus *Fomes fomentarius*, false chanterelle *Hygrophoropsis aurantiaca*, amethyst deceiver *Laccaria amethystea*, common puffball *Lycoperdon perlatum*, the blusher *Amanita rubescens*, candle-snuff fungus *Xylaria hypoxylon* and grey spotted amanita *Amanita excelsa*.

A few very interesting insects were found early in the walk notably seven-spot ladybird *Coccinella septempunctata*, green leaf-hopper *Cicadella viridis* and a stunning lacewing larvae which was covering itself in detritus as a disguise. The day became increasingly sunny and we had lunch in a long wide cleared area that was a different habitat - much damper with ditches and acidic moorland. Erica and Keith spotted a common frog *Rana temporaria* catching and feeding on a froghopper. This area also produced a beautiful common darter *Sympetrum striolatum*, large yellow underwing *Noctua pronuba*, green-veined white *Pieris napi*, large white *Pieris brassicae*, small heath *Coenonympha pamphilus*, peacock *Aglais io* and white-tailed bumblebee *Bombus lucorum*. A pair of buzzards *Buteo buteo* mewed and soared overhead enjoying the warm breeze.

All of the paths were criss-crossed and numerous plants were seen – too many to mention them all but notable species included marsh pennywort *Hydrocotyle vulgaris*, marsh woundwort *Stachys palustris*, red bartsia *Odontites vernus*, hairy tare *Vicia hirsuta*, common spotted orchid *Dactylorhiza fuchsii*, common centaury *Centaureum erythraea*, common kidneyvetch *Anthyllis vulneraria* and a lovely display of fox and cubs *Pilosella aurantiaca*. One highlight was a superb specimen of *Taphrina alni*, a fungal plant pathogen that causes alder tongue gall, a chemically induced distortion of female alder catkins.

The variety of tree species was outstanding – Douglas fir *Pseudotsuga menziesii*, sycamore maple *Acer pseudoplatanus*, western hemlock *Tsuga heterophylla*, European ash *Fraxinus excelsior*, Japanese larch *Larix kaempferi*, pedunculate oak *Quercus robur*, Norway spruce *Picea abies*, English elm *Ulmus procera* and the common alder *Alnus glutinosa* to name a few. On the way back we walked past a delightful beech wood on Trondheim Hill on the north-west edge.

Overall a splendid new destination for the Society and all credit to Jean Long for finding out about it and putting it forward as an outing. Thanks also to Jean for leading the walk so ably and for carrying out meticulous research into the paths and trails to devise such an interesting and enjoyable day out.

Lynn Youngs

The Hirsell – Coach trip

12th August 2017, Leader: Committee

The rain that had accompanied our coach trip from Edinburgh was still falling as we arrived at the Hirsell car park. By the time that cash had been found to pay for the coach parking, the rain had stopped. We set off to follow the Dunglass Walk, the first of three walks starting from the Visitors' Centre. This took us between the Hirsell House and the Garden House, eventually crossing the Leet Water and returning through policy woodland on its east bank.

Our party soon divided into two groups. The vanguard of eleven reached the picnic tables for lunch an hour and a half before the five mycologists who were collecting fungi in the woods. In the afternoon the first eleven walked around the Hirsell Lake, without actually seeing much of it because of the dense barrier of trees, and then completed a circuit of the paths around the Garden House. By this time the sun had appeared and the tearoom was calling, so we adjourned for refreshments while the mycologists took a late lunch and set off for their circuit of the Lake. Thankfully both groups were back at the coach in good time for our return journey.

The natural history was mainly of interest to the mycologists, ornithologists and those who like large exotic trees. Scarcely a blade of grass was out of place in the manicured verges, and the relative absence of flowers was the main reason for the scarcity of insects. I saw only three bumblebees, no beetles of any kind, and very few butterflies. Perhaps some of the Hirsell's tidiness could be sacrificed to provide a habitat that is suitable for pollinators. That aside, the mycologists had a field day, and Cameron has kindly supplied the account that follows:

David Adamson

Many fungi are not readily identifiable in the field and require time whilst they are poked at to encourage colour change, smelt for distinctive odours or various features are scrutinised under a hand lens. When several fungi experts come together, this all creates a lengthy discussion about how to interpret the results, thereby slowing them down to almost a standstill. For this reason, a small contingent of people (Vladimir Krivtsov, Mary Clarkson, Joanie McNaughton, Jean Long and myself) formed a slow-moving team at the Nat's visit to the Hirsell. Jean and Joanie proved quite invaluable, having a wonderful ability to find fungi tucked away in the undergrowth and off the beaten track, bringing them back for the rest of us to look at. Although there were many finds, below are just the highlights.

The Milkcaps

The milkcaps *Lactarius* are fungi that produce milk when damaged. Closer scrutiny of this milk can often aid identification:

Beech milkcap *Lactarius blennius* is a common milkcap under beech. It has darker spots and zones on its cap surface and its milk doesn't do anything noticeable; just a white fluid is released when the gills are damaged.

Lactarius fluens is similar to the above but without the markings on the cap although it does produce rather more milk.

Fiery milkcap *Lactarius pyrogalus* is an interesting species often found under hazel. Translate the specific name (fire milk) and you'll understand why it is often given to beginners to taste; its milk is extremely hot.

One of the best finds of the day was *Lactarius azonites*, which Vladimir described as smelling like freshly cooked panini. The milk in this species, given a few seconds on exposure, changes from white to a lovely deep pink.

The brackets

These are the fungi that grow out from trees or tree stumps looking like shelves and dropping their spores from the underside.

Southern bracket *Ganoderma australis* on beech. One of the first fungi finds of the day just after we left the car park. A huge gingery brown bracket with a thick white edge & underside. This species often coats the ground and plants underneath with a thick scattering of ginger brown spores.

Oak mazegill *Daedalea quercina* on oak stump. This very large bracket was found on a couple of occasions on the walk. From above it may be mistaken for a pale *Ganoderma* however the underside has a wonderful labyrinthine spore surface which is where this fungus gets its generic name. Daedalus was the creator of the labyrinth on Crete, in which the Minotaur was kept.

The dapperlings

The genus *Lepiota* is a group of gilled fungi with the common name of dapperling. These smaller fungi tend to be white with a highly patterned cap surface. We were lucky enough to find three species:

Lepiota subalba under beech. A small white *Lepiota*, going slightly darker in the cap centre. Its most distinctive feature was a curtain of white fragments hanging off the edge of the cap, looking like celebratory bunting.

Stinking dapperling *Lepiota cristata* under mixed deciduous trees. Another classic, white *Lepiota* but with orange brown scales on upper cap surface and with large central dark area. It has a very distinctive strong smell that you either find unpleasant or agreeable.

Girdled dapperling *Lepiota boudieri* under beech. A rich orange brown radially fibrous cap, this was the most colourful of the three we found.

The gasteromycetes or puffballs, earthballs and earth stars

These were once thought to be a natural grouping as they share a similar growth form, spores produced inside a large sphere that are knocked or puffed out. With modern scientific studies it's now realised that they are not related but happen to share common means of spore dispersal.

Scaly earth ball *Scleroderma verrucosum* on soil. Earth balls are sometimes mistaken for puffballs but they don't normally have a distinctive stalk and they are also quite thick skinned. Also, instead of producing a neat pore on the top to 'puff' the spores out, they tend to 'tear' open to release the spores.

Striated earth star *Geastrum striatum* on soil. This was the small earth star that Vladimir kindly took around on the coach journey home. The arms had folded back to give the appearance of a star with the round spore sac in the centre, waiting for rain drops to puff out the spores.

Stump puffball *Lycoperdon pyriforme* on tree stumps. This puffball was quite common in the right areas and is an easy puffball to identify as it grows on wood rather than soil.

Rusts

Rust are a special group of fungi that are parasites, producing orange powdery lesions on plant leaves giving the appearance that the plant has become 'rusty'. Rust fungi change their colour and offer their hosts as the season progresses and some of these different coloured stages were seen at the Hirsell.

Rose rust *Phragmidium mucronatum* on rose. Whereas many rusts are a pale orange, this rust is particularly vivid and is specific to most wild roses except burnet rose *Rosa spinosissima* which has its own rust.

Puccinia circaeae on enchanter's nightshade. The brown spores of this rust species are very obvious as they form rings of growth on the underside of the leaves, often causing pale yellow areas on the upper surface.

Sedge rust *Puccinia caricina* on pendulous sedge. Although normally found in the orange state, what was interesting was the inclusion of some very dark lines, which was the rust changing its orange stage to the darker brown stage.

Brightly coloured fungi

Some of the fungi we came across provided colour (or the lack of) to aid identification:

White fibre cap *Inocybe geophylla* on soil in woodland. A poisonous species that produces two wonderful colour forms: pure white and vivid lilac (*var. lilacina*). For those of you who attended the foray, it was this species that had the faint smell of bleach.

Blackening brittle gill *Russula nigricans* on beech. Just next to the *Ganoderma* (see above) was a large number of *Russula nigricans*, a large gilled fungus that when damaged first goes red, then black, hence the name. This colour change not only makes this an interesting find but also helps in identification.

Rosy bonnet *Mycena rosea* under yew. This was a small pink fungus that at first was thought to have been another pink species, but its strong radish-like smell and pinkish gills confirmed its identity.

Sepia bolete *Xerocomellus porosporus*. Boletes don't have gills but pores, so when turned over, they have a spongy appearance for an underside of the cap. Most species have bright or distinctive colours but this species looks as if it has all the coloured drained out of it, hence the name and this lack of strong colour helps with its identification. See the next fungus (below) to see a twist in the story.

Hypomyces chrysospermus. Unusual, as it grows on other fungi. It starts off as a white mould but very soon changes to a wonderful golden yellow as it matures. It was found on the Sepia bolete (above) one of its favourite hosts and changing it from a pale green brown to a beautiful golden yellow colour.

Oddities

Two interesting or unusual fungi:

Claviceps purpurea (ergot). This is becoming more familiar to people and is easy to find as it has a very specific habitat requirement; it grows as a parasite on grass flower heads, replacing the grass seed with itself. It looks like a large black grain of rice, curving out from the flower head. It is poisonous, and due to the fact that it also grows on oats and wheat, has provided a long history of problems for humans. If you want to know more, look up the disease, St Anthony's Fire.

Jelly babies *Leotia lubrica*. Growing from the woodland floor, this small dark yellow fungus has a tough jelly-like structure with a rounded head, hence getting the name of jelly baby. Easily recognised in the field.

What we didn't find

Bell's bonnet cap *Mycena belliae*. The Hirsel is famous mycologically as it was within the reservoir that a Miss Bell discovered a rather unique fungus, *Mycena belliae*. This little bonnet is a specialist, growing on *Phragmites* reed still standing in the water. It grows up from the stems, sometimes from under the water's surface. It is not common and despite several attempts we were unsuccessful at finding it on this occasion.

Cameron Die Konigin

Kinneil Estate NTS 984 807

19th August 2017, Leader: Malcolm Lavery

What was possibly the Society's first ever visit to Kinneil Estate on the outskirts of Bo'ness drew a healthy attendance of 18 members on a bright day. This attractive area of mixed woodland and parkland offers not only wildlife interest, but much of more general historical importance dating back to Roman times.

We gathered close to the imposing 15th century Kinneil House, which was only saved from demolition in the 1930s by the discovery of rare renaissance wall paintings inside. The house is under the care of Historic Environment Scotland and while partly ruined, can be visited on open

days throughout the year. A workshop used by James Watt lies to the rear, with a rusting prototype steam cylinder outside. The course of the Antonine Wall runs through the estate, with the site of a Roman fortlet along its path. Our plan was to spend the morning exploring the grounds and, given time, to take a look at the neighbouring Kinneil Nature Reserve, created on the site of an extensive former coal mine which employed many hundreds of people up to its closure in 1983.

Crossing a burn beyond the house our attention was drawn to a larva of the orange 16-spot ladybird *Halyzia sedecimguttata* on a wooden post, and with the day brightening 2 red admirals *Vanessa atalanta* were spotted. Bees were on the wing and species seen early on included buff tail *Bombus terrestris*, white tail *B. lucorum* and red tail *B. lapidarius*, with early *B. pratorum* and common carder *B. pascuorum*. Jackie later spotted a kidney-spot ladybird *Chilocorus renipustulatus*.

We made our way along the edge of a mixed tree belt, seeing several species of non-native trees including southern beech *Nothofagus sp.*, lodgepole pine *Pinus contorta* and two species of alder. Keen eyes noticed several small, black and spiky larvae on ash trunks, and close by an unusual ladybird, also black, with an orange spot on either side. After some discussion and consultation with smartphone apps, it was decided that this was the kidney-spot ladybird *Chilocorus renipustulatus* and its larvae, rarely reported in Scotland but more often seen south of the border.

Approaching the smaller of two ponds on the estate we encountered a pair of mute swans *Cygnus olor* with a family of 8 well-grown cygnets. The swans seemed to be stripping small water snails from weed which was then discarded, behaviour that is apparently quite common in a species which also includes small frogs, worms and fish in its mainly vegetarian diet. Celery-leaved buttercup *Ranunculus sceleratus* was noted fringing the pond. A short walk took us on to the larger pond which offered more extensive bird life. Coot *Fulica atra*, tufted duck *Aythya fuligula* and a briefly-glimpsed little grebe or dabchick *Tachybaptus ruficollis* were noted, and a healthy colony of black-headed gulls *Chroicocephalus ridibundus* was present.

To complete a circuit of the grounds we made our way back through a network of woodland paths. After a period of recent wet weather, there were many fungi present. Ochre brittlegill *Russula ochroleuca* seemed to be everywhere as did ugly milkcap *Lactarius turpis* and we did not have to search far for bay bolete *Boletus badius*. There were some less common fungi, too. The brightly coloured dyer's mazegill *Phaeolus schweinitzii* at the base of a conifer on the hill is not often seen in the Lothians, being much more frequent in the Highlands. A fawn-coloured poroid fungus growing in a rosette, found by Wilma Harper under willow and later identified as blushing rosette *Abortiporus biennis* is much more frequent in England and is uncommon in Scotland.

Descending above a deep stream bed towards our starting point, we saw and heard more birdlife, including coal tit *Periparus ater* and great tit *Parus major*, goldfinch *Carduelis carduelis* and tree creeper *Certhia familiaris*.

After a short break to visit the small but interesting Kinneil Museum, we headed over to nearby Kinneil Nature Reserve which fringes the Firth of Forth. This area of reclaimed colliery workings is known as a good vantage point for spotting a variety of waders and other seabirds. We were able to pick out a wide range of birds including a flock of over 40 shelduck *Tadorna tadorna* on the water, and curlew *Numenius arquata*, lapwing *Vanellus vanellus*, redshank *Tringa totanus* and a group of 10 black-tailed godwit *Limosa limosa* crowded along the rocky shoreline. The reserve is rich in plantlife too. Wild carrot *Daucus carota*, with its characteristic reddish spot in the centre of the flat white flower, was abundant, as was eyebright *Euphrasia officinalis*. Centaury *Centaureum erythraea* and melilot *Melilotus* brightened the pathsides in flower and kidney vetch *Anthyllis vulneraria*, though gone over, was widespread. Birch bolete *Leccinum scabrum* was found on the island section of the reserve.

With late afternoon approaching we returned to the car park, having enjoyed two sites with much of natural history interest and also offering insights into the social and industrial past of what is perhaps a too-often neglected part of central Scotland.

Malcolm Lavery, with thanks to Mary Clarkson for contribution on fungi.

Footnote:

I enjoyed the trip to the Kinneil Estate in the morning, but couldn't manage the Kinneil Nature Reserve in the afternoon. A pity since I first took the Nats there in 2000, a year after I 'discovered' it and before it was designated a Nature Reserve.

It is largely built on coal waste which is quite calcareous and must have been sown with lime-loving plants such as wild carrot *Daucus carota*, rough hawkbit *Leontodon hispidus* and hoary plantain *Plantago media*, all rarities in West Lothian Vice County. There were also a few trees and shrubs scattered about (including the odd plant of sea buckthorn *Hippophae rhamnoides*), and I remember being struck by the presence of both willow warblers *Phylloscopus trochilus* and skylarks *Alauda arvensis*. I next visited in 2010, and was horrified to see that the sea buckthorn had spread to form thickets. No skylarks now, but still some rare plants – and I'm pleased to hear that some are still there.

Incidentally just after the visit I discovered that Kinneil House figures in a book of crime stories set in locations around Scotland, some famous, some obscure, entitled 'Bloody Scotland'.

Jackie Muscott

Hawkcraig Point, Aberdour NT 199 851

26th August 2017, Leader: Hannah Grist

It's not often that the appropriate footwear for a Nats excursion includes sandals and wellington boots. Fortunately we were led by Hannah Grist from Capturing our Coast who would help us understand the diversity and complexity of the inter-tidal zone and surrounding habitats. Hawkcraig Point sits between the Silversands beach and Aberdour harbour. We had planned a day when the tide would be out and were fortunate that it was also the sort of warm sunny day, ideal for the seaside. The day began with appropriate introductory messages from Hannah about taking care on the rocks and slippery surfaces, and ensuring that any specimens we were interested in remained in their chosen habitat. It was great to have someone on hand to identify and explain what we were seeing as we worked down towards the sea.

Jackie Muscott had remained at the back of the beach looking for the plants existing on the edge of the land. On the cliffs above the bay were thrift *Armeria maritima*, sea campion *Silene uniflora* and sea plantain *Plantago maritima*. On dunes above were kidney vetch *Anthyllis vulneraria* (a lime-lover) plus thyme *Thymus polytrichus*, lady's bedstraw *Galium verum*, bird's-foot trefoil *Lotus corniculatus*, harebell *Campanula rotundifolia* and yellow oat-grass *Trisetum flavescens* - a dainty yellowish grass whose flowers have long awns. There were also two late-flowering umbels - upright hedge-parsley *Torilis japonica* and burnet saxifrage *Pimpinella saxifraga* another lime lover. The latter, like many saxifrages, often grows on rocks and in rock-crevices and saxifraga means 'stone-breaker'. As a result of this supposed attribute saxifrages were once used as a medicine for gallstones! All the plants mentioned were in flower. In among them were some common garden escapes such as Michaelmas Daisy *Aster* agg. and some scrub, the most attractive being honeysuckle *Lonicera periclymenum*. Fungi were evident in the dunes where *Marasmius oreades* had created a fairy ring. The rust *Coleosporium tussilaginis* on colt's-foot *Tussilago farfara* and the parasitic fungus *Mycosphaerella podagrariae* on ground elder *Aegopodium podagraria* were both quite common. From here a seal, probably grey *Halichoerus grypus*, could be seen off-shore. David Adamson and Davina Hill were left at the top of the shore with a little group of lichen and bryophyte hunters. There was a typical upper shore range of lichens. On the soil between rocks was a leafy liverwort *Porella platyphylla* and on the path near the railway was the acrocarpus moss *Encalypta vulgaris*.

The slip-risk group only managed to explore a small area of the shore. There was sea aster *Aster tripolium* in mud by the tide line. Hannah pointed out the seaweed succession and we saw channel wrack *Pelvetia canaliculata* and twisted wrack *Fucus spiralis* which are the most obvious occupants of the top shore. There was an exercise to count the plates of barnacles coating the rocks.

The native barnacle *Semibalanus balanoides* has six plates with the Australian incomer Darwin's barnacle *Elminius modestus* having four plates. Shells of periwinkles and topshells were compared. Steuart Ferguson's sharp eyes found and photographed some minute hermit crabs *Pagurus* sp. Looking under the seaweed and in pools we found a multitude of different colours and forms of seaweed. Areas of bright pink crustiness were just that, a pink encrusting coralline alga that would need closer examination to name. One or two beadlet anemones *Actinia equina* hid in rock pools and a few people looked at the ancient-looking chitons *Lepidochitona cinereus*.

At lunchtime Steuart pointed out sandwich terns *Thalasseus sandvicensis*. There was a grey heron *Ardea cinerea* behaving suspiciously and possibly eating a fish. The butterfly highlights included painted lady *Vanessa cardui* and small copper *Lycaena phlaeas*. Bumblebees were represented by buff-tailed *Bombus terrestris* and red-tailed *B. lapidarius*.

Some people decided to call it a day at that point but a group of us decided to investigate the wild flower patches which turned out to be a fairly standard wildflower mix. Near here we found forest bugs *Pentatonia rufipes* and later on the hairy or sloe shieldbug *Dolycoris baccarum* which we are becoming familiar with. Later, a few noticed sea arrow grass *Triglochin maritima* and purple milk vetch *Astragalus danicus*. Looking back across the Forth to Edinburgh we could even pick out the groups of people on top of Arthur's Seat.

Thanks to Jackie Muscott, David Adamson, Davina Hill and Steuart Ferguson for their wide-ranging observations. Our lists would add to Hannah's knowledge about the organisms of Hawkcraig Point.

Wilma Harper and Sarah Adamson

Morton Lochs, Tentsmuir NO 464 263

2nd September 2017, Leader: Wilma Harper

We've had a number of good excursions to the National Nature Reserve and forest at Tentsmuir and Morton Lochs in the past, so when I saw in the Reserve Newsletter that there had been work done to improve the site for dragonflies, it seemed worth a return visit.

The access to Morton Lochs from the public road is along a pot-holed farm track before crossing the causeway between the two main lochs to the car park by the old railway bridge. Some of us were fortunate to see a red squirrel *Sciurus vulgaris*, a particularly dark individual, in the trees by the carpark. First stop was the railway hide at the end of the south loch. There was no sign of the kingfisher *Alcedo atthis* or even the water rail *Rallus aquaticus* which had been reported but we did get a good view of roe deer *Capreolus capreolus* on the far side coming down to drink.

It turned out to be a pleasant warm September day and as the plan was to see insects we made for the newly restored ponds and ditches. We had been given permission to enter the area to the west of the main lochs. This did entail climbing a gate and taking care at times near the electric fences, in place to manage the cattle. The area had a very different feel to the conifer forest on the east side of the lochs comprising grassland and deciduous scrub. The improvement work had cleared out some of the ponds and ditches and created areas where reed beds could develop.

The area marked on the map as reed beds was a series of linked pools favoured by common darters *Sympetrum striolatum*, fascinating to watch, if a bit elusive to photograph. Further on, particularly on old branches at the margins of the pools, we started seeing black darters *Sympetrum danae*.

On such a warm day, we were also getting butterflies: small copper *Lycaena phlaeas*, green-veined white *Pieris napi*, large white *Pieris brassicae* and red admiral *Vanessa atalanta*.. The shrubs were examined and hairy shield bugs *Dolycoris baccarum* found. In an area occasionally grazed by cattle, it was not surprising we saw dor beetle *Geotrupes stercorarius*.

After lunch we headed to the most northerly of the pools. This did entail removing backpacks to crawl under the electric fences and Steuart confirmed that at least some wires were live. These pools were less open, with rushes *Juncus* sp, mare's-tail *Hippuris vulgaris* and bur-reed *Sparganium*

erectum. This habitat seemed particularly attractive to emerald damselflies *Lestes sponsa* and also the common hawker *Aeshna juncea*.

Back in the reserve proper we called into each of the hides. No squirrels were seen at the squirrel hide but the feed put out for them was attracting a number of small birds and a small mammal which, after some debate, was identified as a bank vole *Clethrionomys glareolus*. Mid-afternoon isn't the best time for birds and there wasn't much to see from the hides. Nevertheless, looking back over the day, the birders had totted up a list of around 20, of which the stock dove *Columba oenas* seemed to be the "best tick".

To round off a pleasant, relaxed day, we adjourned to the Thai Teak Cafe for tea and cakes before heading for home.

Wilma Harper

Tynninghame and Estuary NT 627 808

9th September 2017, Leader: Peter Leach

Tynninghame has become known in recent years as an al fresco wedding venue and a Mecca for dog-walkers, but a little ingenuity and slight effort took the fourteen members who attended, away to quieter climes.

The rain from early morning ceased before we assembled and began our walk at the end of Lime-tree Walk. The track through the woods to the bay had botanical interests. Notable were the line of very mature field maple *Acer campestre*, trees which reach their northern limit hereabouts. A couple of brown hares *Lepus europaeus* had a combative engagement in a field to the west. Fungi were scarce all day, but a large edible mushroom, known as the Prince *Agaricus augustus* was found. Possibly the most unusual member of the *Pezizales* was hare's ear *Otidea onotica*, with a few dozen ochre coloured fruiting bodies projecting skywards up to 10 cm. tall. *Amanitai* were not common, but the lemon-capped amanita *A. citrina* and the blusher *A. rubescens* were both found (both edible but because of the danger of misidentification, not recommended).

A distinctive narrow projection of sand dune habitat named Sandy Hirst almost splits the estuary into two. At low tide the beach on the seaward side was thick with hundreds of thousands of seashells. Most were gastropods, particularly winkles. Marram grass *Ammophila arenaria* and lyme grass *Leymus arenarius* formed a thick fringe to the dune with perennial sow thistle *Sonchus arvensis* and sea mayweed *Tripleurospermum maritimum* flowering well on the top of the dune. Sea sandwort *Honkenya peploides* and sea rocket *Cakile maritima* and two oraches, *Atriplex prostrata* ag. and *A. laciniata* peppered the lower dune.

We rounded the point and followed the inner boundary of the Hirst. The salt marsh inland of Heckies Hole is the biggest and best in the Lothians with a complete succession down to the estuarine mud. The junction between the dune system and upper marsh was distinguished by several scarce plants: sea wormwood *Artemisia maritima* at its northern limit, great sea spurrey *Spergularia media* and sea milkwort *Glaux maritima*, which was no longer in flower. The middle marsh had a complex mosaic of many halophytes: glassworts *Salicornia* sp., sea aster *Aster tripolium*, sea plantain *Plantago maritima*, sea blite *Suaeda maritima*, thrift *Armeria maritima* and saltmarsh grass *Puccinellia maritima*.

A range of bird species was also evident from the shore, including curlew *Numenius arquata*, redshank *Tringa totanus*, oystercatcher *Haematopus ostralegus*, goosander *Mergus merganser*, grey heron *Ardea cinerea*, black-headed gull *Chroicocephalus ridibundus*, northern gannet *Morus bassanus*, black-tailed godwit *Limosa limosa*, whimbrel *Numenius phaeopus* and little egret *Egretta garzetta*.

We proceeded to the west, through mixed woodland, to the point where the River Tyne spills into the tidal estuary. It was notable that, considering it was so late in the season, there were good numbers of butterflies, with speckled wood *Pararge aegeria* particularly common.

Birds included coal tit *Periparus ater* and jay *Garrulus glandarius*, with swallows *Hirundo rustica* overhead.

We skirted the grounds of Tynninghame House to return by way of The Avenue, where a common frog *Rana temporaria* was found amongst the grass and chaffinch *Fringilla coelebs*, dunnoek *Prunella modularis*, great tit *Parus major*, greenfinch *Carduelis chloris* and goldcrest *Regulus regulus* were seen bathing in a large puddle shortly before the car park.

Nev. Crowther & Peter Leach

Linkfield NT 651 787

16th September 2017, Leader: Jean Long

A very small group met at the car park on a morning threatening rain. We set off for the conifer plantation to look for fungi, although the advertised expert mycologist was unable to attend. Our leader had recced the area well and led us to places where there were many interesting species and the small number of attendees allowed everyone to discuss the finds. We saw many species which one would expect to find with conifers, including the violaceous - capped primrose brittlegill *Russula sardonia*, both the normal species and the greenish var. *mellina*, both of which have bright yellow flesh and gills – hence the name. Also present was bloody brittlegill *Russula sanguinaria* whose name describes the cap colour and which is sometimes confused with the previous species. We also found grey knight *Tricholoma terreum*, root rot *Heterobasidion annosum*, which smells of turpentine and is a real ‘baddy’ in a conifer plantation and the white and lilac fibre-caps *Inocybe geophylla* and the closely related *Inocybe lilacina*. ‘Catch of the Day’ however, as far as we were concerned, was dog stinkhorn *Mutinus caninus* which our leader spotted in a thick part of the wood. We made a short sally on to Spike Island, the part of the reserve beyond the saltmarsh and nearest the sea, to look for dune cup *Peziza ammophila* and did, indeed, find it pushing up out of the sand beside the marram grass *Ammophila arenaria* with which it grows. Returning through the dunes, our leader spotted another interesting fungus on grass remains on the path – the tiny Hairy Parachute *Crinipellis scabella* which is not common in Scotland and which only one of us had seen before – about 20 years earlier. Although it was late in the season, several flowers were still in bloom: Harebell *Campanula rotundifolia*, Blue Fleabane *Erigeron acer*, Grass of Parnassus *Parnassia palustris* and, surprisingly, Spring Beauty *Claytonia perfoliata*! It had been an excellent excursion and we were incredibly lucky as the heavens opened as we reached the cars.

Mary Clarkson

Earlston Circuit NT 575 385

23rd September 2017, Leader: Lynn Youngs

A small group set off from the War Memorial in Earlston on what looked like a very promising weather day; we were not disappointed and the day stayed warm and dry throughout, with sunny intervals.

We left Earlston by a footpath along field edges and enjoyed a superb display of *Xanthoria parietina* on a hawthorn hedge; every branch and twig was literally covered with this brightly coloured lichen. Before turning off this path to take a route towards Georgefield Farm we found the first of numerous fungi of the day – a splendid specimen of *Ganoderma applanatum*. Just before we reached the farm we admired an ancient culvert bordered by an avenue of poplar trees and covered in mosses *Hypnum cupressiforme* and *Eurhynchium striatum*.

The farm was good for birds and species seen included mistle thrush *Turdus viscivorus*, European robin *Erithacus rubecula*, chaffinch *Fringilla coelebs*, house sparrow *Passer domesticus*, pied wagtail *Motacilla alba*, buzzard *Buteo buteo* and numerous jackdaws *Corvus monedula*. As we left the farm we spotted a lovely display of *Parasola plicatilis* on land adjacent to the farm buildings.

Our route carried on to Whitefield Farm and progress was slow due to the large variety of fungi that was found on either side of the track. Notable species included *Suillus luteus*, *Lactarius blennius*, *Stereum hirsutum*, *Leccinum scabrum* and *Bovista nigrescens*. Marsh woundwort *Stachys palustris* was still flowering and was quite plentiful in a ditch running parallel to the track. Just before Whitefield Farm we were delighted to spot a female common hawkmoth *Aeshna juncea* laying eggs in a small pond and she gave us all excellent views. The pond was covered with pond skaters family *Gerridae* and nearby Jean found a larch ladybird *Aphidecta oblitterata*. A flock of lapwings *Vanellus vanellus* was seen flying and swooping over the ground in the distance. A short distance further up the track we came across dozens of common spotted orchids *Dactylorhiza fuchsii* which were all very tall specimens. The flowers had gone over and it would be worth returning in the summer to see the orchids in full bloom. Just beside the orchids we spotted sharp-flowered rush *Juncus acutiflorus* and compact rush *Juncus conglomeratus*.

At the farm we saw swallows *Hirundo rustica* gathering on wires prior to their long migration to Africa and a couple of red admirals *Vanessa atalanta* flew overhead.

We had lunch at the corner of a field bordered by Japanese larch *Larix kaempferi* and European larch *L. decidua* which were covered in cones. A kestrel *Falco tinnunculus* was spotted flying very fast and pink-footed geese *Anser brachyrhynchus* were seen in the distance. After lunch we began the easy-angled climb on grassy slopes to the summit of Black Hill. Harebells *Campanula rotundifolia* were everywhere and other common species included common yarrow *Achillea millefolium*, yellow oat grass *Trisetum flavescens*, common bent *Agrostis capillaris* and crested dog's-tail *Cynosurus cristatus*. The grassy ascent proved to be outstanding for waxcaps and species seen included *Hygrocybe pratensis*, *Hygrocybe psittacina*, *Hygrocybe virginea* and *Hygrocybe coccinea*. A highlight of the walk was the sheer number of waxcaps seen on Black Hill and we estimated that this totalled several hundred. Black Hill summit was eventually reached and we enjoyed expansive views of the surrounding Borders landscape bathed in sunshine. We descended through non-flowering common gorse *Ulex europaeus* bushes to join a track that would take us to Cowdenknowes Mains. Along here we saw more fungi and the highlights were a huge specimen of *Meripilus giganteus*, a large ring of *Lactarius vellereus* and a few specimens of *Lactarius subdulcis*. The track was bordered by mature beech trees *Fagus sylvaticus* that were just beginning to turn into their autumn colours.

The final stretch of the walk was along "Speedy's Path" which runs parallel to the Leader Water and this offered a different habitat through woodland. Blue tit *Cyanistes caeruleus* and great tits *P. major* were spotted and more fungi including *Lycoperdon perlatum* and *Gymnopus confluentis*. Notable plants seen were enchanter's nightshade *Circaea lutetiana*, slender St. John's-wort *Hypericum pulchrum*, meadow vetchling *Lathyrus pratensis* and broad buckler fern *Dryopteris dilatata*.

Overall a very enjoyable outing which was particularly good for fungi.

Lynn Youngs

Hallmanor Forest, Peebles NT 212 353

30th September 2017, Leader Rebecca Yahr

As we have for the last ten years, we enquired of Chris Ellis and Beccy Yahr at RBGE whether they would like once again to lead a lichen foray to conclude our summer programme. A quick response from Chris produced a novel idea. He had been contacted recently by a lady from the Manor Valley called Sandy Goodwill, who had been building a dossier of wildlife information with the aid of several local specialists, at a small site called Hallmanor, close to her home. She hoped that Chris would be able to help with an extension to this project, by surveying the lichen population. Chris requested our assistance to fulfil this wish. We thought it a fine idea, and one which could be open-ended and extended to cover other *Cryptogams*, in much the same way that we have contributed to 'Bioblitzes' in recent years.

On a fine morning, eight of us assembled on the roadside by the gateway to the woodland. Sandy arrived with Beccy Yahr, who would maintain a watch on our identification frailties. There was a temptation to simply produce a list of lichens, but we agreed with Sandy that we would also compile a list of lower plants and fungi.

The main feature of the site was a loch 200m X 100m surrounded by mixed woodland of varied ages. Micro-habitats of numerous types abounded at ground level with soil, gravel and vegetation as a substrate: on rocks, walls and boulders and on trees and shrubs from the base of trunks to the highest twigs. Lichen species growing on the bark and twigs of trees are the most numerous and predictable. Smooth barked trees such as European ash *Fraxinus excelsior*, rowan *Sorbus aucuparia*, hazel *Corylus avellana* and others such as European beech *Fagus sylvatica* in pollution free areas like this, have crustose lichens forming an interlocking surface community known as *Graphidion*. We found the following common species in this community: *Lecanora chlarotera*, *Lecidella elaeochroma*, *Graphis scripta*, *Arthonia radicata*, *Phlyctis argena*, *Pertusaria pertusa* and *P. amara*. Intermingled were the bryophytes *Ulota bruchii* and *Frullania dilatata*, the latter a leafy liverwort often maroon in colour.

In the twiggy branches many foliose and fruticose lichens replace some of those above. Most frequent are *Evernia prunastri*, *Parmelia sulcata*, *P. saxatilis* and *Platismatia glauca*. In the higher branches the fruticose genera *Usnea* and *Bryoria* are frequently found, tufted and hanging.

On the mature rough-barked trees such as oak *Quercus sp.*, alder *Alnus sp.* and pine *Pinus sp.*, many lichen species such as those in the last paragraph are to be found. In the fissures and grooves in the trunks we find leprose lichens (powdery) *Chrysothrix candelaris* and *Lepraria incana* without apothecia, along with lichens bearing pin shaped apothecia from the genera *Chaenotheca* and *Calicium*.

On the woodland floor beneath these epiphyte communities which cloak the surfaces of the dominant woody plants, we found other lichens and many bryophytes mixed with herbs and grasses. Others especially, formed associations on soil and dead wood. Mosses included cushions & entangled communities of the three common *Rhytidiadelphus* species, with *Plagiothecium undulatum*, *Thuidium tamariscinum*, *Hylocomium splendens* and *Pseudoscleropodium purum*, all large and common. The leafy liverworts *Nowellia curvifolia* and *Lophocolea bidentata*, both small and delicate hid amongst other mosses *Dicranum scoparium* and *Hypnum spp.* common around the base of tree trunks often associated with species of *Cladonia* such as *furcata sp.*, *fimbriata sp.*, *coniocraea sp.*, *floerkeana sp.* and *portentosa sp.*

On the side of some forest tracks the vegetation was cropped short and contained a complex mosaic of grasses and herbs with several dog lichens, *Peltigera didactyla*, *hymenina* and *membranacea* and the liverworts *Jungermannia gracillima* and *Scapania irrigua*. A surprise find in this mosaic were several fleshy khaki-green bubbles, slimy and formless. They were free-living cyano-bacteria, species of *Nostoc*, which forms the photobiont partner of many lichens including the *Peltigera sp.* above. Other species relevant to our search were golden-yellow fruiting bodies of *Suillus grevillei*, the larch bolete, unsurprisingly beneath their mycorrhizal partners on the edge of the woodland. A few *Hygrocybe sp.*, waxcaps, colourfully littered the mosaic and lots of another fungus of unimproved grassland, *Cystoderma amianthinum*, were common. A violet ground beetle *Carabus violaceus* entertained us for a few minutes, before other beetles and ladybirds were found on a nearby fence. There was a single-eyed *Anatis ocellata*, many orange *Halyzia sedecimgutata* and a few larch *Amphydecta obliterated* ladybirds. Other sightings of insects were unremarkable, although David inevitably added a queen *Bombus jonellus* bumble bee and several males of the *Bombus lucorum agg.* We all saw scores of speckled woods *Pararge aegeria* and a couple of *Nymphalids*. Many common agarics were identified in the shade of the larger woodland trees. Notable for their number were tough shanks *Gymnopus confluens* and *Rhodocollybia butyracea*, and the *Clitocybe spp. nebularis* and *flaccida*. Several species of *Russula*, *Amanita* and *Laccaria* were quite common. Confusing and unusual was a basidiomycete *Omphalina luteovitellina* which is the mycobiont partner of unicellular green alga. Many of the larger trees had an orange dusting of a filamentous

‘green’ called *Trentopohlia* which has carotid pigments and so appears orange. It’s free-living, but also the hidden symbiotic partner in a number of common lichens.

The concrete dam wall was coloured by many square metres of orange apothecia of *Protoblastenia rupestris*, a relative of the lichen genus *Caloplaca*. Two more mosses, the first *Schistidium crassipilum*, with hoary cushions resembling *Grimmia* sp. and another calcicole *Encalypta streptocarpa* usually without the large calyptra of its relatives, were also discovered on this site. The circle of our walk was completed by walking back to our cars along the road, bounded by dry-stane dykes. Here we were able to increase our species count considerably, recording several crustose and foliose lichens typical of walls constructed of acid siliceous material. Most distinctive were the colourful crustose species *Rhizocarpon geographicum*, *Lecidia lithophylla*, *Tephromela atra*, *Lecanora rupicola* and *Ochrolechia parella*. A few foliose lichens broke up the surface, such as *Parmelia saxatilis* and *Hypogymnia physoides* with the grey cushions of the moss *Grimmia pulvinata* and tufts of *Dicranoweisia cirrata*.

A lasting memory of the day was the finding within a mound of logs covered in mosses, of a fungal fruiting body which we initially thought belonged to the *Hydnaceae*. The pastel-shaded soft brown and cream cap with scores of spore-bearing white spines was *Pseudohydnum gelatinosum*, which emitted a ghostly glow in the midst of loose heaps of *Thuidium*, *Hylocomium*, *Polytrichum commune* and *Plagiomnium undulatum*.

Thanks for submitting additional notes go to Vladimir, David and Beccy.

Neville Crowther

Lowrie’s Den, NT 220 599

7th October 2017, Leader: Jean Long

The day started with a look at fungi by the road. During this foray, some of the group came across micromoth pupae on rushes *Juncus* spp. Devil’s-bit scabious *Succisa pratensis* was seen upon venturing into the woodland. Lynn mentioned a radio programme that had been on that morning discussing a mining bee species, the small scabious mining bee *Andrena marginata* which is dependent on this flower genus. In Scotland, this bee species is only found around the Great Glen and Speyside. One species of bee was seen that day - common carder *Bombus pascuorum*. The group stopped in this wooded patch to look at trees and Stuart and I spotted honeysuckle *Lonicera periclymenum* was growing through rowan *Sorbus aucuparia*. We then headed out into the clear, following a path lined with brambles *Rubus fruticosus* on one side and bush vetch *Vicia sepium* growing in patches.

Stretches of alder *Alnus glutinosa* and willow *Salix* sp. were passed. Among these was bay willow *Salix pentandra*. Vlad pointed out the differences between bay and the other willow, sallow *Salix caprea* present. The leaves are very similar to bay leaves, hence the name, whereas sallow, or goat willow, has less glossy leaves which are slightly more rounded at the tip.

The group entered a patch of conifer woodland where more fungi were found as well as hawthorn *Crataegus monogyna*. Some of the group saw goldcrests *Regulus regulus* while the rest of the group went ahead and saw herb robert *Geranium robertianum* and pink purslane *Claytonia sibirica* in flower. The latter was introduced to the UK in the 18th Century, brought from its native range in Siberia and west North America and is often white!

On a stretch down to the burn, we saw the views up to the Pentlands. Vlad found sulphur tuft *Hypholoma fasciculare* and mentioned it had a bitter taste to it. Some of us were brave enough to verify this as we were reassured it is safe to taste this fungi, unlike others we saw. Only do this on recommendation of someone who knows a lot about fungi. There was no longer an easy crossing at this part of the burn, so the group then headed back along the path to a place where crossing was possible. It was on this route I found larch ladybirds *Aphidecta oblitterata* on fence posts. After a few minutes’ walk, we reached a bridge crossing the burn and came across stone markers. Peter had found one and we had a closer look to find ‘E&D.W.T.’ written on them. The bridge used to be an

aqueduct and it appeared these stone markers may have marked a water pipe as the abbreviation stood for Edinburgh and District Water Trust.

Further along the route, porcelain fungus *Oudemansiella mucida* was seen growing on a beech tree *Fagus sylvatica*. This fungus is named after its shiny cap and this could be seen well, despite growing fairly high up on the tree. Nearing lunchtime, a patch of dead wood was found with candlesnuff *Xylaria hypoxylon* on it.

The lunch spot gave an area to show the species of fungi found during the morning. Vlad went through these. Some of the highlights were amethyst deceiver *Laccaria amethystea*, red cracked bolete *Boletus chrysenteron*, the blusher *Amanita rubescens* and coconut milkcap *Lactarius glyciosmus*. One species found brought some hilarity as it was called hedgehog fungus *Hydnum repandum*. This is due to spikes on the underside. To identify some fungi species, the senses of smell and taste are used as well as identifying visually. One example was *Heterobasidion annosum* which smells like turpentine and is found under conifers. Many thanks to Vlad for going through the fungi and showing us the wide array that grows in an area such as Lowrie's Den.

After lunch, the group headed towards the road, where there was another taste session, this time *Chalciporus piperatus* which has a peppery taste. At one section of Lowrie's Den Road, New Zealand willowherb *Epilobium brunnescens* was seen. Some of the group ended up venturing over the road to another area while Jean led the rest of us along the planned route. We started to get views of Penicuik as we embarked on the final stretch of the excursion.

At the end, in deciduous woodland, chiffchaff *Phylloscopus collybita* was spotted and a nuthatch *Sitta europaea* was heard before being seen by Stuart and Wilma.

This finished a great outing lead by Jean, covering a wide variety of fungi as well as other taxa. Ptolemy McKinnon

Lowrie's Den fungi list

Red cracked bolete *Boletus chrysenteron*, suede/yellow-cracked bolete *Boletus subtomentosus*, rustgill *Gymnopilus* sp, beech knight *Tricholoma sciodes*, *Schizopora paradoxa*, *Lactarius blennius*, *Psathyrella* sp, butter cap, *Collybia butyracea*, *Lepista flaccida*, *Pleurotus* sp, *Pholiota squarrosa*, *Clitocybe nebularis*, brown birch bolete *Laccinum scabrum*, birch knight mushroom *Tricholoma fulvum*, candlesnuff *Xylaria hypoxylon*, sulphur tuft *Hypholoma fasciculare*, porcelain *Oudemansiella mucida*, *Gymnopus confluens*, winter chanterelle *Cantharellus tubaeformis*, the blusher *Amanita rubescens*, *Lactarius quietus*, beech sickener *Russula nobilis*, coconut milkcap *Lactarius glyciosmus*, amethyst deceiver *Laccaria amethystea*, chanterelle *Cantharellus cibarius*, *Mycena alcalina*, *Polyporus ciliatus*, hedgehog fungus *Hydnum repandum*, *Heterobasidion annosum*, *Ascocoryne sarcoides*, geranium brittlegill *Russula fellea*, penny bun *Boletus edulis*, *Trametes versicolor* and *Chalciporus piperatus*.

Beecraigs Country Park NT 007 747

21st October 2017, Leader: David Adamson

Eight of us met outside the new Beecraigs Visitor Centre, which looks across the Lothians and Edinburgh to the distant Lammermuir Hills, Berwick Law and even the Bass Rock. Since our last visit in 2012, the improvements made to the country park include paths that are marked by coloured discs on pathside posts. Therefore there was little risk of losing our way despite the many trails in the Beecraigs woods.

Our first destination was the south-west corner of the country park, where a line of beech trees has, in the past, been rich in fungi. Perhaps due to the long, damp summer and the continuing mild weather, the fungi that we saw, although numerous in places, were mainly commonplace and a bit past their best. Therefore we made fairly quick progress, reaching Guthrie's Path, as the southern boundary route is known, in only 45 minutes. On the way we paused by the meadow where belted Galloway cattle were grazing on some of the tougher grasses. In summer this meadow is home to several hundred orchids.

Having arrived at Guthrie's Path much earlier than planned, we continued to follow the purple, then orange waymarked paths, and arrived at Beecraigs Loch where we had lunch. There were ducks, geese, swan, moorhens, dabchicks, and cormorants on the loch, which contrasted with the paucity of the birdlife in the forest. Dorothy rescued an unfamiliar moth from mud on a path and we had stopped to look at dog lichens *Peltigera sp.* by the Balvormie Road. Happily the good company and conversation compensated for the lack of any special natural history interest. We did see plenty of larch *Aphidecta oblitterata* and orange *Halysia sedecimguttata* ladybirds on the fence-posts of the deer enclosure, and a few drone-flies on ragwort, but perhaps the most unusual find was a tiny fungus growing on moss at the base of a spruce. Under magnification it became apparent that the stalk was dark brown and club-shaped and the cap was a bright lemon yellow. The meeting ended a bit earlier than usual with some of us sampling the food and drink in the Hideaway Cafe at the Visitor Centre.

David Adamson

Gilmerton House Estate,

11th November 2017, Leader: Jean Long

Sixteen members assembled on a cold but bright morning for this excursion to a site which was new to the NATS but, in many ways, typifies this eastern part of East Lothian.

From the parking area there were extensive views to the south and east of the Gilmerton Estate's several thousand acres of farmland, with the prominent feature of Markle Mains Heights on the horizon. This rocky outcrop, bisected by a prominent cleft in the rocks, is a small reflection of the larger outcrops at Traprain Law and the Garleton Hills, both of which have also been quarried. Young oak trees around from the car park area were found to host both spangle galls *Neuroterus quercusbaccarum* and marble galls *Andricus kollari* and also appeared to provide feeding for mixed flocks of finches, more of which were seen later. A short walk along a field edge took us to a most unusual feature – an extensive pile of large tree roots and trunks, the product of clearance work for the Borders Railway, and now destined for Gilmerton House's biomass boiler. Before incineration, it was the host of a number of flowering plants and fungi, including viper's bugloss *Echium vulgare*, Himalayan balsam *Impatiens glandulifera*, nipplewort *Lapsana communis*, herb-Robert *Geranium robertianum*, perforate St. John's wort *Hypericum perforatum*, white dead-nettle *Lamium album*, peeling oysterling *Crepidotus mollis*, bitter bracket *Postia stiptica*, turkeytail *Trametes versicolor*, smoky bracket *Bjerkandera adusta* and root rot *Heterobasidion annosum*.

Geese are a fairly regular feature in the skies of East Lothian at this time of year and we were pleased to see a skein of some 60 or so pink-footed geese *Anser brachyrhynchus*, flying from their roosting grounds on the coast to daytime feeding areas inland.

We made our way through attractive mixed woodland, where forest shield bug *Pentatoma rufipes* nymphs were found at a vantage point giving a view of the impressive façade of Gilmerton House. The estate has been in the hands of the Kinloch family since the 17th century when Sir Francis Kinloch was given a baronetcy by King James II, but the present house dates principally from 1750. In the 1800s it was a holiday home for the present baronet's grandparents, whose principal residence was in London, but is now an exclusive events venue.

Particular interest was shown in a plant with lovely seed heads covering an extensive area nearby. After considerable deliberation the consensus was that it was a garden escape, *Ligularia sp.* From nearby we were able to see buildings belonging to the National Museum of Flight and the summit of North Berwick Law.

Our route now took us to the walled garden, passing Home Farm, now a residential property, and a number of wartime buildings accommodating small businesses. The walled garden, in the early stage of restoration by a group of volunteers, provided a sunny spot for lunch, where we were joined by a red admiral *Vanessa atalanta*.

Following lunch we returned by way of the main driveway and its striking mixed hedge, passing our starting point to access an avenue of lime trees *Tilia sp.*, where *Hebeloma sp.* fungus was found. Passing through a young mixed plantation and an area of mature Scots pines *Pinus sylvestris* we had a commanding view of the Museum of Flight airfield and a number of aircraft, before completing our walk by way of Sunnyside Strip to our starting point.

Further observations: jay *Garrulus glandarius* heard twice, long-tailed tit *Aegithalos caudatus*, buzzard *Buteo buteo*, bullfinch *Pyrrhula pyrrhula*, nuthatch *Sitta europaea*, chaffinch *Fringilla coelebs*, twite *Carduelis flavirostris*, common carder bee *Bombus pascuorum*, buff-tail bumblebee (queen) *B. terrestris*, *Pimpla* species of ichneumon wasp, drone fly *Eristalis sp.*, winter heliotrope *Petasites fragrans*, and the following still flowering: red campion *Silene dioica*, fumitory *Fumaria sp.*, ragwort *Senecio sp.*, knapweed *Centaurea sp.* and hedge woundwort *Stachys sylvaticus*.

Peter Leach & Jean Long

Cockenzie NT 399 758

2nd December 2017, Leader: Erica Bright

A pleasant day beckoned, with light cloud, and a brisk wind blowing: perfect for a winter's day by the sea in East Lothian!

I chose Cockenzie for an excursion because of its interesting history and development surrounding the connected industries of salt, coal and fishing, not to speak of the 1745 Battle of Prestonpans. There were also the seabirds and anything natural-historical which we might come across.

We were a group of 10 Nats, meeting at Cockenzie House, conveniently located beside a bus stop. Cockenzie House was built as a home for the manager of the industrial operations owned by the 3rd Earl of Winton, who, having created 12 salt pans in 1623 and increasing coal production, became known as the greatest coal and salt-master in Scotland. Following the 5th (and last) Earl of Winton's involvement in the disastrous Jacobite rebellion of 1715, his estates were forfeited to the Crown and subsequently sold to the York Buildings Company of London. In 1722 they laid the Tranent to Cockenzie wooden wagonway, probably the first railway in Scotland, using horses to transport coal from the pit-heads to the harbour.

We briefly walked round to the Old Harbour (substantially reconstructed in 1833/4 by civil engineer Robert Stephenson for Hugh Cadell, who had taken over the ownership of the mines) to have a look at the site of the old wagonway tracks, recently exposed in a community dig (in which Sarah Adamson and I happened to have briefly taken part during our recce; beady-eyed Sarah found a fragment of clay pipe with the letters RS which pleased the archaeologist in charge, albeit the letters no doubt referred to the pipe-maker rather than the great engineer himself).

From here we followed the shore, passing a rocky inlet where there still remains a perfect small natural beach (but none of us ventured a swim...). Proceeding further, we reached the New Harbour which was built at Port Seton, completed in 1880 to provide much-needed additional harbour space for the boom in herring fishing/boat-building etc. Here there were plenty of colourful fishing boats, and it is very much a working harbour. Three ancient 'fisherman's' anchors provided some discussion about their design, and on close scrutiny I spotted a beautiful hoverfly sheltering in the rusting surface (perhaps the black painted surface in full sunshine was providing this insect with a suitably thermal environment in which to over-winter?).

It was surprising throughout the day to find so many plants still flowering in early December: Oxford ragwort *Senecio squalidus*, thrift *Armeria maritima*, yarrow *Achillea millefolium*, convolvulus *Convolvulus arvensis*, red campion *Silene dioica*, white dead-nettle *Lamium album*, herb Robert *Geranium robertianum*, vipers bugloss *Echium vulgare*, sea rocket



Cakile maritima, orache *Atriplex* sp. (with goosefoot-shaped leaves). Is this another sign of milder winters/climate change? In addition, at one point, Janet Watson announced “I'll tell you a record. I have just eaten a raspberry” - and some of us joined her and indeed the raspberries were delicious! We spotted coastal plants such as common scurvygrass *Cochlearia officinalis*, bucks-horn plantain *Plantago coronopus*, as well as sow-thistle *Sonchus* sp., scentless mayweed *Tripleurospermum maritimum* agg. and mallow *Malva* sp; and when looking out to sea, both on our outward walk and on our later return as the tide was coming in, there were sightings of cormorants *Phalacrocorax carbo*, shags *P. aristotelis*, eider *Somateria mollissima*, purple sandpipers *Calidris maritima*, turnstones *Arenaria interpres*, curlew *Numenius arquata*, redshank *Tringa totanus*, oystercatchers *Haematopus ostralegus*, rock pipits *Anthus petrosus*, wigeon *Anas penelope*, black-headed gulls *Chroicocephalus ridibundus*, bar-tailed godwits *Limosa lapponica* with long straight slightly upturned beak - and large flocks of both golden plover *Pluvialis apricaria* (c150) and lapwing *Vanellus vanellus*. There was also the odd wagtail *Motacilla* sp.

At the edge of the town, we turned inland on a path bordering pony paddocks and a strip of woodland, including pines. As we progressed towards Seton Collegiate Church (closed) through mixed woodland we saw coal tits *Periparus ater* and a great spotted woodpecker *Dendrocopos major*.

A kestrel *Falco tinnunculus* hovered over the adjoining golf course, which is a fairly recent development, and includes landscaped scrapes attracting numbers of water birds, besides plenty of rough grass. As we made our way back to Cockenzie keeping to the far edge of the golf course (common fumitory *Fumaria officinalis* growing in profusion along the fence-line) and through a damp area where a fresh-water stream is piped towards the sea, a grey heron *Ardea cinerea* flew up from the grasses, where it was no doubt looking to spike some tasty morsel.

As we passed through the attractive old part of Cockenzie, with many houses being built between 1900 and 1910, with forestairs and the occasional weather vane, a large skein of geese flew overhead. Reaching Cockenzie House, we found an interesting demonstration of salt panning in progress; the ready availability of coal and seawater gave rise to salt making, another important and valuable local industry linked to the preservation of the fish catch, and essentially dependent on the mining of coal; the manufacture of salt had been carried out since about 1200, possibly starting with the monks at Newbattle Abbey. Between 1716 and 1717, 13 salt pans were operating at Cockenzie and Port Seton, providing 9% of Scottish production. Information boards throughout the town give details of these three interlinked industries, and of the history of the waggonway, the Battle of Prestonpans and the role of Cockenzie House.

As the sun was setting, a pleasant tea was enjoyed in the cafe at Cockenzie House, where an array of activities, workshops and small entrepreneurial businesses are in operation, besides extensive gardens and allotments providing plants for sale throughout the year - success indeed!

Erica Bright

Silverknowes to Cramond NT 202 770

28th December 2017, Leader: Janet Watson

On a beautiful morning, with frost on the ground and blue sky above, ten of us set out to walk up through the woods to Cramond village. The views over the Forth and to the snow covered hills beyond were magnificent.

We stopped for a while at the site of the Roman fort established around the year 140 during the building of the Antonine Wall. It was abandoned and then reoccupied in about 208 when the Romans, under Emperor Septimius Severus, were making their final attempt to subdue the savages north of Hadrian's Wall. Our route then took us down to the river and we followed the Almond up as far as the weir by the remains of the old Fair-a-Far Mill. Here, an engineering project is underway to build a new fish ladder, which it is hoped will encourage Atlantic salmon *Salmo salar* and sea trout *Salmo trutta* to venture up the river.

Our bird list was growing steadily. We had long-tailed tit *Aegithalos caudatus* in the wood, then five heron *Ardea cinerea* standing in the sunshine on the bank while four dabchick *Tachybaptus ruficollis* bobbed about in the water. Mallard *Anas platyrhynchos* and black-headed gulls *Chroicacephalus ridibundus* were plentiful but only a couple of goosander *Mergus merganser* and one grey wagtail *Motacilla cinerea* were seen. Among the birds near the mouth of the river we noted turnstone *Arenaria interpres*, oystercatcher *Haematopus ostralegus*, lapwing *Vanellus vanellus*, godwit *Limosa sp.*, curlew *Numenius arquata*, redshank *Tringa totanus* and dunlin *Calidris alpina*. As we walked back along the coast a flock of around 500 knot *Calidris canutus* rose from the shore to wheel around in the sunshine. Those of us who had begun to think of lunch as a priority then missed what was probably the highlight of the morning, a kingfisher *Alcedo atthis* sitting on a post. Fortunately Joanie has a good photograph.

Seven non-walkers joined us for lunch. This was an enjoyable occasion bringing together some Nats who do not meet so often these days. The only controversial topic at my end of the table seemed to be the fate of the mince pies !

Thank you Janet for another very successful Christmas outing.

Lyn Blades

The 2017 long summer excursion was based in Rothbury, Northumberland and the following eight accounts give a flavour of Members' experiences:

Rothbury Holiday

12th to 16th June 2017

In the days before setting off to Northumberland several people decided that they would meet up on the 13th. A select group met at Rochester High Fort and after a short blustery walk around the Roman remains decided to find somewhere more sheltered. We drove around the Ministry of Defence Otterburn Ranges to Holystone and parked in the woodland car park west of the small village. A short walk through mixed woodland, recently cleared conifer wood and over a cattle field took us to The Lady's Well. Here a large pool created by spring water still supplies the village with water. The well has a long history. Apparently 3000 people were baptised here in AD 627, and for many years it was tended by Benedictine Nuns. It was here that we met Jean Murray and Maureen Richardson on their way from Galashiels to Thropton.

The overspill stream heading down to the village was lined with what looked like blood-drop emlets *Mimulus sp.**, an intriguing plant name that usually evokes discussion amongst observers of wild plants. Their story is about introduction and hybridisation. As we would see over the next few days there are very few areas that are genuinely untouched by man.

Sarah Adamson

*Note – since writing, the Mimulus Story has taken another turn. *Mimulus guttatus* has doubled the number of its chromosomes, polyploidy, and created the Shetland monkeyflower with a bigger flower and wider throat than its ancestors. It made the BBC News headlines and the following reference outlines the story.

Violeta I Simón-Porcar et al, Recent autopolyploidization in a naturalized population of *Mimulus guttatus* (Phrymaceae), *Botanical Journal of the Linnean Society* (2017)

Breamish Valley at Ingram

13th June 2017

We met at Bulby Wood car park and, typically, having renewed acquaintances headed off in small groups. Some stayed at river level and others set off up the hill amongst the hillforts. The walk was along a mown grass path through the open moorland. The path took a route steeply up to Brough

Law Hillfort and a panoramic view of a loop of the River Breamish. This fort was evident on the ground with stones and turf ridges forming a circle. Further on Turf Knowe and Ingram Hill Hillfort were less obvious on the ground. My main memory was of disturbing a couple of snipe *Gallinago gallinago* and the appearance of the Breamish River running along its shingly bed. On descending the hill we lunched with others on the river shingle.

Sarah Adamson

Branton Ponds

13th June 2017

We were met by 3 members of the Alnwick Wildlife Group, Richard Poppleton & his wife Jane, and Keith Davison who lives close to the reserve. We met in the car park, and Richard gave an introductory talk on the history of the reserve.

Branton Ponds were privately owned by CEMEX Ltd, but gravel extraction ended about 20 years ago and in 2016 the site was bought by the local landowner at Hedgeley Hall, John Carr-Ellison. The former gravel works consist of 2 ponds, separated by a dividing path above a main gas pipeline. They have been landscaped and opened to public access as a nature conservation area. A small advisory committee has been set up to help advise the landowner on suitable management regimes and Alnwick Wildlife Group members form the majority of that committee.

The (older) east pond is heavily planted with trees while waterside vegetation is becoming well established; the (newer) west pond has less tree cover and is still developing although one reedbed area is well advanced.

Cemex used Exmoor ponies around the west pond for conservation grazing, but they were not very effective. The new owner is using a small group of Galloway cattle in the summer months for the same purpose with much more encouraging results. The site is bounded on the north by the River Breamish which extends the habitat available to wildlife.

Richard had provided their species list to Sarah in advance. As always, the Edinburgh Nats were keen to help spot any species that could be added to the list.

Roger noted a fumaria and tufted vetch *Vicia cracca* in the car park verge. Both were new to the species list, and were not seen again during the visit. David spotted a cucumber spider *Araniella cucurbitina* on hogweed *Heracleum sphondylium*.

We started on our circuit of the ponds, and after going through some light woodland, we reached a point with a clear view of the pond and behind a lovely margin of yellow flag iris *Iris pseudacorus* was a fine stand of flowering rush *Butomus umbellatus*.

About half way round the ponds, we reached a drier area of the reserve where Richard brought squirrel-tail fescue *Vulpia bromoides* to our attention. Nearby we found *Aira caryophyllea*, another new species for the site list.

We soon reached a dry gravel bank area which was covered in hare's-foot clover *Trifolium arvense* and small cudweed *Filago minima*. Roger spotted an interesting potentilla. No one present was sure what it was. Subsequent correspondence has identified this as ternate-leaved cinquefoil *Potentilla norvegica*. This is an unusual find, only seen once before in Northumberland. A fine addition to the site species list.

On the ponds, there was a variety of ducks with tufted duck *Aythya fuligula* and goldeneye *Bucephala clangula* noted.

David compiled an insect list including eight species of bumble bee, and the striking rhinoceros beetle *Sinodendron cylindricum*.

Roger Holme

Boulmer Beach

14th June 2017

After a morning in the ‘managed’ landscape of Howick Hall, it was a refreshing change to spend time in the afternoon on the beach at nearby Boulmer which seemed to have little but a line of bungalows on the landward side of a road and a small car park. There must have been more, though, as two or three Northumbrian fishing cobs, with their distinctive canvas-covered bows, were moored in the bay. We spent time in a small area of dunes between a field fence and the sand, looking at what was growing and, on the sand itself, looking for shells. The vegetation was very much what you would expect in such an area in the early summer: red fescue *Festuca rubra*, lyme grass *Leymus arenarius*, sand sedge *Carex arenaria*, silverweed *Potentilla anserina*, restharrow *Ononis repens*, yarrow *Achillea millefolia*, bird’s-foot trefoil *Lotus corniculatus*, and, on the sand, sea sandwort *Honckenya peploides* and an unidentified orache *Atriplex* sp. There was a good quantity of mugwort *Artemisia vulgaris* and hogweed *Heracleum sphondylium* and, by the side of a stream the poisonous hemlock water-dropwort *Oenanthe croccata*. Less obvious and not yet in bloom were lesser meadow-rue *Thalictrum minus* and what we thought was likely to be crow garlic *Allium vineale*.

Looking at shells was hindered by our search for cowries of which we found only two which, as they seemed to have no markings, were probably arctic cowries *Trivia arctica*. However, we also spotted dog whelks *Nucella lapillus*, common periwinkles *Littorina littorea*, thin tellins *Angulus tenuis*, striped venus shells *Chamelea gallina* and grey top shells *Gibbula cineraria*.



There were few birds, the only ones on the water being a pair of shelduck *Tadorna tadorna*. On the beach we spotted a pied wagtail *Motacilla alba yarrellii* and a pipit which disappeared over a field fence.

Mary Clarkson

Howick Hall and Long Nanny

14th June 2017

The morning at Howick Hall was spent exploring the “short” walk around the arboretum (which took us two and a half hours) and in the afternoon a walk around the formal gardens to locate the pocket handkerchief tree. After this Joanie, Helen and I spent some time in the recently opened Visitor Centre where there were very useful and interesting albums, with photos, available to find out more about the arboretum’s seed gathering, mostly done in conjunction with Quarryhill Botanical Garden in California. These journals explained that many of the expeditions to China and Japan have been led by the Royal Botanic Garden, Kew and where relevant, all have been hosted by an authorised institution in the country concerned, and collections are made conforming to CBD and CITES. A computerised database should be available on the website in the future. Seedlings are exchanged with botanic gardens, arboreta and gardens open to the public in the UK, while seed is exchanged with many international botanic gardens throughout the world. Reading the personal stories about the day to day living on the expeditions - accidentally camping on a burial mound in Sechzuan Province, for instance - were a bonus to our visit.

After a stop for ice cream at the Earl Grey tea house I met up with Ptolemy and drove to Long Nanny. The following is a description of the site by the National Trust Ranger, Kate:

*The Long Nanny Tern site is located between the villages of Beadnell and Low Newton. It is a nationally important breeding site and 2017 marks 40 years since the National Trust began working to protect the site and the birds that breed there. For nine months of the year, the site blends into the vast stretch of unspoilt beach that is Beadnell Bay. As May arrives it all changes as thousands of birds arrive on site for the start of the three month breeding season. It becomes a temporary home for three species of ground nesting bird: the little tern *Sternula albifrons*, Arctic tern *Sterna**

paradisaea and ringed plover *Charadrius hiaticula*. Since the National Trust started managing the site, breeding numbers have been increasing. Starting with only three pairs of little terns in 1977, the numbers of this species have increased each breeding season to a current total of 30-50 pairs. This makes the Long Nanny a nationally important site for the little terns, with approximately 2% of the British breeding population using the site. It is also home to the largest mainland breeding colony of Arctic terns in the UK. After the first recorded pair bred on the reserve in 1980, the colony has grown considerably, reaching a high of 2,443 pairs in 2014. Last but by no means least the Long Nanny site also supports a regionally important breeding population of ringed plovers, with around 10 to 15 pairs nesting annually, spreading between the saltmarsh, spit and front dune system. Every season National Trust Rangers live on site camping in the dunes and providing a 24 hour watch for the nesting birds, protecting them from predators and welcoming visitors to the site. Even before the birds arrive there is plenty to get ready. Vegetation needs to be cut back, signs installed, fences checked and possibly most important, erecting the compost toilet shed. Also, with the permission of Natural England, the National Trust is trialling the management of areas of vegetation at the site and the use of decoy birds, to encourage the birds to nest further away from the high tide line. The conservation work being done to protect these very special birds is part of a wider project supported by EU LIFE+ and is a partnership between the RSPB, Northumberland AONB partnership, National Trust and Lindisfarne National Nature Reserve. As the season gets underway rangers are kept busy monitoring the birds' progress, rescuing low lying nests from high tides, chasing away badgers, foxes and other predators and welcoming visitors.

In preparing for my trip to the site I had contacted Ptolemy to ask if the rangers provided hats because of my previous experiences on the Farne Islands. I was assured they wouldn't be needed. How wrong we were! While watching the birds return to their nests with beaks full of sand eels I was suddenly aware of a painful bang on the top of my head and looked up to see an arctic tern hovering. When I touched the sore spot it was bleeding. The necessary first aid treatment gave me a chance to see the Rangers' rudimentary accommodation and sample the water supply, brought to the site in jerry cans!

It was a real privilege to see the nesting arctic and little terns so close up and hear directly from Ptolemy and his fellow assistant wardens about the work they do around the clock during the season. It was also thanks to Ptolemy that I was tipped off to the possibility of spoonbills at the Creswell/Druridge Bay area, more of which below:

Starting from Warkworth on Thursday morning, 15th June, we headed for Druridge Bay Country Park Visitor Centre as I had been following @BSBIbotany on twitter and had been alerted to a bee orchid *Ophrys apifera* there. We had a fruitless search at the Visitor Centre end of the lake and moved to the boating jetty half way down, where Katherine found the orchid. This was a first for me and it was looking spectacular on a bank of wild flowers. After this find we drove onto Creswell looking for spoonbill *Platalea leucorodia*, avocet *Recurvirostra avosetta* and little gulls *Larus minutus* and were able to watch a pair of avocets.

Pauline King

Brinkburn Priory

15th June 2017

A small group opted to visit Brinkburn Priory near Rothbury on the Thursday. This involved a very pleasant walk among woodland from the car park high above the river to the sheltered valley where the priory was built 'on the brink of the burn'. There was a nice selection of woodland plants including wood anemone *Anemone nemorosa*, sanicle *Sanicula europaea*, figwort *Scrophularia nodosa* and hairy St. John's-wort *Hypericum hirsutum*, which is not all that common. In wetter areas bugle *Ajuga reptans* and yellow pimpernel *Lysimachia nemorum* were creeping about. There was also quite a bit of wood sedge *Carex sylvatica*, and two woodland grasses - wood brome *Bromopsis ramosa* and false brome *Brachypodium sylvaticum*.

Little remains of the priory itself but the priory church still stands. After the reformation it was used by the local populace but eventually fell into disuse, and was restored in Victorian times. Nearby is an elegant country house which incorporates some of the priory ruins. Its main door is only a few yards from the side door of the church, so it was just a short walk for the family – and presumably the monks before them.

We had been hoping to walk further along the river, but the next section was privately owned, so we contented ourselves by eating our lunch in the sun in the shelter of the priory grounds, peering over the fence at the river and chatting to some workmen who were engaged in maintenance. The workmen said they had seen kingfishers *Alcedo atthis* and dippers *Cinclus cinclus* from time to time, but all we managed were grey wagtails *Motacilla cinerea*. We planned to move back to Rothbury and walk along the river there, only to find it was far from sheltered with a strong wind funnelling along the water. So we headed for a café instead and bumped into Helen who had walked from Craggside where she had spent the morning, and who fancied an ice cream. So the day concluded with a small convivial meeting.

Jackie Muscott

A Force of Nature

16th June 2017

On our way home we set off for Chillingham and ended up at Ford. A road diversion put us back into the Breamish Valley which becomes the River Till at Bewick Mill before flowing into the River Tweed. Earlier in the week at Ingram walking amongst the former hillforts, the river was striking with its wide shingle bed. A short distance downstream at Branton Ponds we saw the results of the gravel workings being abandoned and the area managed for wildlife. Following the river the signs that gravel extraction continues were evident. Further on the landscape changed. The valley narrowed to an excellent fishing river with a fearful reputation for flooding.

On this day Ford was a peaceful hamlet where we learned about the Joicey family's beliefs in nurturing children, which continue today. In 1907 the 1st Baron Joicey bought the estate from Lady Louisa Waterford and in 1908 he acquired the neighbouring estate of Etal. Since 1956 the medieval Ford Castle has been managed by Northumberland Council as a residential outdoor education centre. Since then I have met people who had discovered their love of nature at Ford Castle. Our stop was short and cultural but further on the miller at Heatherslaw Cornmill, on the Till, spoke about the once in a lifetime flood in 2008 – there was another in 2016! She was passionate about the fixability of the 700 year old mill still producing various milled products.

Perhaps a theme for another holiday – Exploring the Journey of a River.

Sarah Adamson

Coming and going

12th & 17th June 2017

Some people took the A687 route to and from Rothbury, stopping at the Hirsell to stretch their legs and have a cup of tea – the lemon scones with lemon curd and cream are definitely recommended. Personally I was pleased to walk round the pond, if a little slowly, to be sworn at by sedge warblers *Acrocephalus schoenobaenus* and to identify greater pond sedge *Carex riparia* which had managed to fight its way through the undergrowth round the pond. I was also delighted to hear the bubbling laugh of the little grebe *Tachybaptus ruficollis*; I didn't see the birds but others reported they had chicks.

The Nats are due to visit in August, so there will doubtless be a full report then.

Jackie Muscott

Indoor meetings

The Ecology of Red Sea Reefs

18th January 2017, Gordon Swann

Although Gordon has dived extensively in Scotland since taking up the sport in 1986, this talk featured the four expeditions he has made to the Red Sea, a somewhat clearer, more colourful and warmer destination.

“Why dive?” was the opening question. The answer included references to adventure, a challenging environment, unfamiliar habitats, strange animals and foreign climes. It was convincing.

There was some equipment involved, of course. Gordon adeptly demonstrated the things with tubes, dials and lights and we all felt ourselves floating weightless.

Once in the water, there were the corals, sponges and anemones, the reef and the wrecks, the starfish and urchins, the worms, mammals and fish. We swam amongst them in shallow water and deep. We entered the Thistlegorm where she lay on the seabed and swam into caves with rays, sharks and Moray eels, in daylight and in darkness.

An aquatic branch for the NATS? Perhaps not, but an experience worth re-living.

Peter Leach

Peat –more than just a bog

15th February 2017, Clifton Bain, IUCN UK

Once dismissed as barren and unproductive, peatland is now the unsung hero of conservation! Peat soils in Scotland contain almost 25 times as much carbon as all other plant life in the UK. The carbon stored in Scotland's soils is equivalent to over 180 years of greenhouse gas emissions from Scotland at current emission rates. Restoring peat-forming habitat previously drained or damaged ensures that the bog remains as a long-term sink rather than a greenhouse gas source.

Scotland's peatlands are an internationally important wildlife habitat. They are known for their moorland breeding birds, and interesting plants, like the insectivorous sundews and butterwort.

However, the bog moss *Sphagnum* drives the process of peat formation.

Healthy upland peatlands provide a regulating function by absorbing atmospheric pollutants including sulphur dioxide, nitrogen and heavy metals. This important role improves water quality to downstream areas. Degradation of peatland habitat results in water discolouration which requires extra treatment before it comes through our taps. Peatlands also regulate runoff which can help reduce downstream flooding, and they are important for maintaining base flows in our upland streams during dry spells. Our peatlands are therefore important for sustaining productive fisheries, high quality drinking water, flood regulation and help give our single malts their unique flavours! Upland peatland areas form some of our most iconic, wild landscapes. The hills are popular places to visit and use for recreation, particularly hill-walking and deer-stalking. Outdoor recreation is important to the rural economy.

Many peatland areas are used for farming, particularly to produce store lambs which are sold on for fattening in the lowlands. Some grazing is good for peatlands, encouraging species diversity.

However over-grazing, particularly in exposed uplands, is harmful.

The palaeoenvironmental archive preserved within the peat, including pollen, plant and insect remains, can be studied to reveal aspects of past changes in climate, environment and vegetation. Peatlands are also culturally significant with archaeological finds giving clues to human activity over thousands of years.

Scotland now has a National Peatland Plan and a Peatland Action Programme to protect and restore important peatlands, for example by removing non-native trees from the Caithness Flow country.

Stan da Prato

Peculiar Penguins & Funny Looking Frogs

15th March 2017, Allyson Bailey

Allyson studied Archaeology and has worked on many digs but has had an interest in nature since she was young. She has photographed wildlife in the UK and around the world. This gave her the reason to write her book entitled 'Peculiar Penguins & Funny Looking Frogs', which I certainly recommend. Her talk, also under the same title, covered the weird and wonderful stages of evolution.

She started with the incredible adaptations of penguins to the cold, for example emperor penguins *Aptenodytes forsteri* in Antarctica. A thick layer of feathers helps these birds survive. Feathers were first seen in the fossil record on dinosaurs, probably used for gliding. This then led to flying in the wide diversity of bird species we can now see around the world. One example of another bird species was that of the hoatzin *Opisthocomus hoazin*, a South American bird. This bird has claws on its wings to help it cling to trees above the water in the riparian environment these birds inhabit. One oddity mentioned was the tree kangaroo *Dendrolagus* sp. as usually we are used to kangaroos being ground-based, agile, jumping marsupials. Continuing with the mammals, Allyson showed photos of a rock hyrax and asked the group what its close relatives were. This animal, which looks not dissimilar to a guinea pig, is closely related to elephants. This has been found out due to genetics, but before this, morphology and behaviour were used for a lot of classification, including one example in the talk, of capybara *Hydrochoerus hydrochaeris* once being classed as fish. The talk then moved onto a specific evolutionary journey of frogs and toads. Allyson spoke of their odd shape, the diversity of roughly 4000 species and the incredible adaptations such as extra ankle joints. From a fish-like organism, limbs evolved from fins leading to tetradomorphs. A salamander-like animal followed, with nasal passage moving to the top of the head for breathing. Allyson then rounded this story off with the evolution of the frog. This included adaptations such as shortening of the spine, position of the pelvis, reduced ribs and no diaphragm, due to the amphibian's squat body. Allyson finished off by mentioning that evolution is not over and is ongoing, even within our own species. The talk was rounded off with a great quote from Dara O'Brien: "Science knows that it does not know everything. If it did, it would stop". This finished a great talk from Allyson covering evolution and all amazing forms of life which shows the variety this process has created.

Ptolemy McKinnon

Members' Night

12th April 2017

Before the start of business at this year's Members' Night, the President extended thanks to everyone who had helped to make this year's series of indoor meetings so successful, making particular mention of Joanie McNaughton, who was retiring from the position of Lecture Secretary after organising these events for five years.

This year's programme was as varied as usual, starting with an amusing talk from **Stan da Prato** on the way the popular press portrays our sometimes difficult relationship with gulls.

It is claimed that there are as many as 1000 incidents a year of mainly lesser black-backed gulls stealing food and attacking people and pets, almost certainly an underestimate. Stan illustrated this with a series of articles and photographs from popular newspapers and magazines, with claims of attacks on dogs, ewes, tortoises, cats and pensioners!

The conclusion? There might be some truth in the stories but they are greatly exaggerated.

Wilma Harper and Sarah Adamson next lead a session which was designed to inform the exercise currently taking place to update the Society's website. Any initial surprise at the suggestion of audience participation was quickly overcome and there was general enthusiasm for producing a list of ten objects, representative of the NATS, which might go into a "time capsule".

Popular suggestions included binoculars, hand lens, note book, lunch box, small mammal skeleton, feather and fungus. Details are included in the article on page 66.

The differing lists from each of the four participating groups will provide interesting and useful material as we consider the future direction of the Society.

A break for refreshments followed, provided as usual by **Sue Crowther** and a number of volunteers. This was supplemented by a couple of practical exercises provided by Wilma and Sarah – matching names to specimens and identifying possible venues for outdoor meetings.

They both attracted enthusiastic participation.

Ptolemy McKinnon provided the final talk of the evening, with his illustrated account of his trip to Tobago as an MSc student studying eco-tourism.

The talk mainly featured birds, but Ptolemy also explained the economic decline of the island with the loss of trade in cocoa and bananas, and the growing importance of tourism to the economy. There were many colourful illustrations of tropical birds and some impressive videos of hummingbirds.

The evening was brought to a close with a vote of thanks to the speakers and other participants who made it such a successful occasion.

Peter Leach

Make River Processes Great Again

13th September 2017, Alison Baker, River Forth Fisheries Trust

Alison Baker kindly stepped in to deliver this lecture when her colleague, Tommy McDermott became unavailable at short notice.

Alison expertly took us through the main processes of river form, function and quality, namely:

- erosion
- transportation
- deposition

River course erosion is a constant process and can be by abrasion, attrition, hydraulic action and corrosion. Eroded material is transported in a number of ways, including suspension, solution, saltation and traction but is eventually deposited as the power of the river diminishes. These processes result in river features such as braided channels, pool riffles, plane beds, step pools, cascades and bedrock.

These processes have not only created the rivers we know now, but since the last ice age our river flora and fauna have adapted to the resulting conditions. Alison gave the examples of deposited gravels being used for fish spawning, the use of eroded clay cliffs for nesting burrows by sand martins and plant seeds and invertebrates carried downstream from upstream bioreserves.

But our rivers have faced significant alterations by man for at least 300 years, for functions such as power generation, mining, transport, settlements, agriculture and water supply.

This human activity has significantly changed the scale and magnitude of natural river processes. Alison gave illustrated examples of ways in which the River Forth Fisheries Trust is restoring rivers to something like their natural state by the removal or modification of man-made features, with particular reference to the rivers Almond and Avon.

Ian Schoolar

The Environmental Projects of Cammo Park

18th October 2017, Nick Bengé, Friends of Cammo

Nick, a local resident and landscape gardener, turned into a one-man powerhouse. As well as his business, Water Gems, he is the driving force behind the Friends of Cammo - a practical ecologist. Cammo Estate is situated on the north-western edge of built-up Edinburgh. This old estate had deteriorated into a collection of remnants of buildings, old parkland trees, pockets of woodland and former pasture/golf course, the main structure being the abandoned walled-garden. The park itself had become a popular dog facility with many of the recently formed dog-caring businesses using the grounds as a communal toilet. The area surrounding the park is likely to disappear under thousands of houses over the next few years - a fairly gloomy picture.

Nick has been through a learning phase when he worked out how to plant specimen trees and has created great swathes of flowering plants. He has weathered the attentions of free-running dogs and coped with the desire lines of the walking public.

The Nats have visited Cammo on several occasions and witnessed the evolution of the new Cammo. One can only admire his enthusiasm and perhaps help in monitoring the organisms and changes that occur.

Sarah Adamson

Capturing our Coast: marine citizen science and the power of the people

15th November 2017, Hannah Grist, Scottish Association for Marine Science

Hannah currently works for SAMS in Oban and runs the Capturing our Coast (CoCoast) programme in Scotland. She began by mentioning one of her big interests is watching and studying seabirds, which she has been able to incorporate into her work. Many people record seabirds as well as other wildlife, much like Nats members do. This is part of citizen science, the topic for Hannah's talk.

Hannah discussed the history of citizen science briefly, stating multiple examples of natural history recording including writings of cherry *Prunus* sp. coming into flower in Japan from 1644. The joy of citizen science was summed up by one quote Hannah showed, by David Lang of OpenROV, an underwater drone project: "The idea of citizen science is thrilling. It is a genuine invitation to be curious. A safe haven for beginners. A licence to explore".

Having not long returned from North America, Hannah gave an insight into projects in Los Angeles called Nature Lab and LA BioSCAN of which the latter has found new species of flies (*Diptera*). Another incredible new finding from citizen science was from a boy in Ukraine spotting an animal taking a hagfish while watching a deep sea live feed on Youtube. This ended up being an elephant seal at roughly 1000metres down, something not recorded before.

Citizen science does not always have to be serious recording, as shown by Hannah's talk. She had come across certain projects which have used games to record data. One example was that of a trip through various passages of a wide range of colours to see how different people perceived colour. Another involved spotting nightjars *Caprimulgus europaeus* from photographs, something the Nats present that night have had mixed fortunes with. This certainly conveyed the amazing camouflage of these birds.

She spoke of a project which has helped locals to ensure people were not illegally fishing in a marine protected area with anglers and kayakers on board. Sometimes citizen science can go wrong though. One slide showed a crowdfunding project to get a plant to glow. However this was unsuccessful.

Having covered the fantastic work of citizen science, Hannah reminded the group of the worrying facts about people losing touch with science. One figure shown was 75% of people in a poll did not know/had not heard of ocean acidification before. Another poll suggested 28% of UK residents avoided science at all costs, whether on the news, in newspapers, journals etc. Taking into account

these may have been small numbers of people in these polls, it still seems worrying. A happy point was a slide about the March for Science where groups are actively promoting science. To finalise the talk, Hannah covered a project CoCoast were running. This is looking at the development of barnacle larvae (*cirripedia*). Some findings were shown, such as cirripede cover increasing in April on the west coast of Scotland due to algal bloom and some barnacles are not breeding due to artificial light from boats and harbours. The talk covered a great range of citizen science and showed the importance of it in gaining data on a variety of topics. Thanks go to Hannah for a great night and for running CoCoast events with the Nats to collect data on shoreline and marine species within the past year. Everyone found these very useful and enjoyed the chance to carry out their own citizen science.

Ptolemy McKinnon



Final words

Conifers at the Botanics

Although, or maybe because, Scotland has only three native conifers (Scots pine, juniper and yew) it has an international reputation for conifer conservation. The legacy of the “planting lairds” can be seen in the champion trees of Perthshire where the Big Tree Country brand attracts tourists to the areas. The sponsoring of the tree hunters like Douglas and Forrest has meant that throughout the country the policy grounds of the grand estates hold a mix of both common and unusual conifers in their arboreta. Starting in the 20th century, the Forestry Commission carried out extensive species and provenance trials which now help predict how species might respond to climate change.

Worldwide there are over 600 species of conifers and of those about a third are under threat of extinction in their native habitats. The conifer conservation programme sponsors expeditions to collect seeds of threatened temperate conifers. These are then germinated and grown on in the Botanics nursery before being sent to forests and estates around Scotland.

The original Alan Mitchell Forestry Commission Booklet 33 is still a very useful resource when identifying conifers although some names may have changed. It's sometimes possible to pick it up in second hand bookshops or online.

([https://www.forestry.gov.uk/P.../FCBK033.pdf/\\$FILE/FCBK033.pdf](https://www.forestry.gov.uk/P.../FCBK033.pdf/$FILE/FCBK033.pdf))

Some of the stories associated with conifers in the Botanics are captured below:

Himalayan cypress *Cupressus cashmeriana*, the sacred tree and national emblem of Bhutan and has been heavily exploited for its timber that is an essential part of Bhutanese temples. Very few natural stands remain, and these are almost all in remote inaccessible valleys. There is an example in the glasshouses but it now survives outside in Edinburgh.

Although today known as the Bhutan Pine, *Pinus wallichiana* actually grows throughout the Himalayas from the Karakoram and Hindu Kush mountains of eastern Afghanistan, across Northern India, through Bhutan and onwards into Yunnan, south-west China. It is the commonest 5 needle pine in Scottish collections and indeed one was found on the excursion to Cramond hinterland, with its characteristic long, resin-coated cones.

The Bhutan pine is named in honour of Dr. Nathaniel Wallich M.D., F.R.As.S., (1786 - 1854), a Dane who in 1807 became a surgeon to the Danish East Indian settlement at Serampore, India. When this was taken over by the British he became a member of the East India Company and in 1815 became superintendent of Calcutta Botanical Gardens.

Regular visitors to the Botanics will have noticed work going on behind the iron bar fence to create a yew hedge. The long term aim of RBG Edinburgh Yew Conservation Hedge Project is to replace the existing holly perimeter hedge at RBGE Inverleith with about 2200 plants of the common yew (*Taxus baccata*) collected from threatened wild populations and famous heritage trees. Planting started in 2014 and will continue as plants become available. Although a number of conservation hedges have been developed in other parts of the world, this is perhaps the first time that a botanic garden will be surrounded by a conservation hedge.

The hedge consists of plants propagated from heritage trees and from native populations. Most of the hedge is plants collected from native populations throughout the species' natural range, especially from countries where the species is listed as nationally threatened. About 20% of the hedge, particularly in the area by the Botanic Cottage, is from heritage trees collected from Scotland, England, Wales and Ireland. There is a large number of well-documented heritage, old-growth yew trees which mainly occur in churchyards and stately homes. The Fortingall Yew in Perthshire is notable for being one of the oldest living trees in the UK. A comprehensive list of heritage trees is listed on the Ancient Yew Group website.

<http://www.ancient-yew.org/>

Two of the major groups of conifers which can look similar are the spruces *Picea spp.* and firs *Abies spp.* Spruce needles are held on short pegs which remain on the branches when the needles

drop, as seen on the traditional Norway spruce Christmas tree. Firs tend to have more of a sucker at the base, leaving scars on the stems. In older spruce trees, the mature cones hang down from the branches whereas in firs they remain upright and candle-like. Fir cones tend to fall apart on the tree leaving a hard upright peg.

There are a number of conifers with scale-like leaves rather than long needles. Lawson cypress *Chamaecyparis lawsoniana* and western red cedar *Thuja plicata* are similar at first glance but Lawson cypress has finer foliage whereas the *Thuja* branches are a glossy dark green. Smell can be a useful feature with Lawson cypress being said to smell like parsley and western red cedar having a sweeter smell like grapefruit or pineapple. The cones of Lawson cypress are the size of a pea held on the underside of the branch. Those of western red cedar sit upright on the upper side.

Others which can be seen include Hinoki cypress *Chamaecyparis obtusa* with more curved sprays and no clear smell; Sawara cypress *C. pisifera* which smell of juniper, *Thujopsis dolabrata* known as Hiba or Japanese arborvitae has big leaves in flat sprays with lovely white underside and Japanese red cedar *Cryptomeria japonica* has needles all around the shoot and cones on the end of branches. Overall quite a challenging group to identify with confidence, made all the more so by many species having a diversity of cultivated forms.

Larch trees are a bit easier to identify as the deciduous conifer most likely to be encountered. The needles are in bunches along the stems. The best means of identifying them is by the cones with European larch *Larix decidua* having straight scales and those of Japanese larch *Larix kaempferi* having recurved bracts and a more wavy edge. The hybrid or Dunkeld larch *Larix x marschlinsii* is widely planted and can show features of both parents but often is more like the Japanese parent.

Forests of larch, particularly in western Britain have been badly affected by the disease *Phytophthora ramorum*.

Towards the pond there are examples of the three species of cedar. Cedars also carry their needles in bunches like larch but are evergreen. Deodar *Cedrus deodara* from the Himalayas is a sacred tree in that region. The ends of the branches typically droop or descend. It is a common specimen tree of parks and churchyards. Moving east to the eastern Mediterranean, the Cedar of Lebanon *Cedrus libani* has level plates of foliage. East again to the Atlas Mountains and north Africa, the native cedar is *Cedrus atlantica* most often the blue grey variant *v. glauca* which tends to have ascending or upward pointing shoots. The descending/level/ascending feature is a good clue for identification if not 100% foolproof.

Finally, the redwoods. The grove of giant redwoods *Sequoiadendron giganteum* is probably known to many children who visit the Botanic and punch the soft deep bark, which is an adaptation to fire. The scaly leaves point outwards and are quite spiny to touch. Coast redwood *Sequoia sempervirens* carries its needles in flattened ranks on either side of the shoots. The Redwood National Park on the coast of California has the distinction of being the home of the tallest tree in the world at 116 metres (the tallest tree in Britain is a Douglas fir *Pseudotsuda menziesii* which is 66 metres)!

It was a fitting place to end a fascinating afternoon. We were all very grateful to Tom Christian for taking the time to show us round the garden and share his knowledge and enthusiasm for conifers with us.

Tom Christian and Wilma Harper



Nats Encapsulated on Members Night

A new website is being created to promote the Nats and streamline how the organisation is managed. The Time Capsule activity was devised to try and identify what the Nats see themselves as; what we are and what we do.

Using cards, the members in three groups, were asked to decide which ten items they would put in the capsule. The other groups could then raise objections and decide whether an item was permissible.

The groups self-selected and went on to decide on a total of 30 items, of which 29 were related to excursions; in particular field study. There were discussions about whether to include outdoor clothing and food; one lunch box was allowed.

Breakdown of items:-

- permanent parts of organism:- exuvia of dragonfly, adder skin, hard fungi (2), jay feather, mammal skull, lichen, dried fern, mermaid's purse or shell, blown egg and red squirrel skeleton
- photos:- flower, lichen and microscope
- specimen pot/bug box
- butterfly net
- piece of basalt or local fossil
- notebook
- journal (3)
- programme
- hand lens (3)
- map of Scotland
- binoculars
- lunch box
- field guide (2)
- ID guide

Helena Pettie later commented on Facebook 'It was a great activity.....getting groups of mixed age, experience, interest – all talking and contributing.' Otherwise it has been discussed since the meeting and suggested that there is a place for more activities like this.

The spread of items clarified that the members saw the Nats as a field study group. The origins of the ENHS are in the Edinburgh Field Naturalists' and Microscopical Society. This conclusion helps in our promotion online highlighting our unique selling point and that we are not a political group.

Sarah Adamson and Wilma Harper



Forth Island Seabird Counts 2017

(Count units: AOB/AON/AOS/AOT = Apparently occupied burrows/nests/sites/territories)

The seabirds on “our” islands seem to have a good start to the season with most species showing increased numbers of birds attempting to breed. Even though we had a wet June the researchers on May Isle NNR reported a good season, with puffin *Fratercula arctica*, kittiwake *Rissa tridactyla* and shag *Phalacrocorax aristotelis* all raising more than the average numbers of chicks. St. Abbs Head NNR reported that they had three gannet *Morus bassanus* adults on nests (AON) this year (1 AON last year) and one chick was hatched though all three nests were deserted by mid-July. In addition they had up to 70 other gannets *Morus bassanus* prospecting on the cliffs so there may be more AON next year.

Fulmar: All islands (other than the Bass) were showing increased numbers (+14%) of adults on sites (AOS) and we need to go back to the early 2000’s before we see similar numbers in the Forth.

Cormorant: This species did better on Craigleith (+58%) and Lamb (+43%) where numbers of AON increased while the colonies on Inchkeith (-5%) and Carr Craig (-20%) showed decreases. Overall the total AON increased (+6%) and this is the highest since 2007.

Shag: Inchmickery is the only island to show a dramatic drop (-37%) in AON and it is thought that this could be due to the presence of rats! The ringers reported finding very few active nests on the ground there this year. RSPB have been monitoring the island to see if rats are present. Overall total shag numbers are up +12% compared to last year and up +5% on the average of the previous 10 years.

Greater black-backed gull: In recent years Craigleith has seen this species go from 6 AOT in 2005 to 51 AOT last year. This year they have dropped by a third to 34 AOT.

Lesser black-backed gull: Where counts were carried out both this year and last year numbers are slightly up i.e. +16 AON or +4%.

Herring gull: Where the figures are available for both 2016 and 2017 numbers are generally showing decreases (i.e. -233 AON or -12%) compared to last year.

Kittiwake: This species has had mixed fortunes on the various islands with some showing increases and others decreases. Isle of May is showing the biggest increase with nearly 600 extra nests this year. Total numbers are up +14% compared to last year and +25% compared to the average for the previous five years. St. Abbs Head NNR also reported a significant increase in AON (i.e. +73%).

Terns: Once again three species were nesting on May Isle: common tern AON up 10%, arctic tern up 58% and sandwich tern with only four pairs (i.e. down 65%).

Razorbill: The biggest numerical difference was on Isle of May where numbers increased by 368 AOS (+11%.) compared to last year. The all islands total AOS this year is the highest since the mid 1990s.

Guillemot: After increases in the last couple of years, numbers on most islands have dropped this year, overall down -21%. Isle of May reported a significant drop of 6,570 birds on the breeding ledges (i.e. -29%).

Puffin: The Isle of May is the only island where puffin numbers were checked and numbers are similar to last year’s count.

With thanks to the Forth Seabird Group, Scottish Natural Heritage and National Trust for Scotland for allowing the use of their data.

Bill Bruce

2017	Bass Rock	Craig-leith	Lamb	Fidra	Inchkeith	Carr Craig	Inchcolm	Haystack	Inch-mickery + Cow & Calves	Inch Garvie / Forth Bridge	Long Craig	May Isle	Total
Fulmar (AOS)	c32+	153	10	199	278	0	303	0	45	207	0	341	1,568
Comorant (AON)	0	63	c60	0	122	68+	0	0	0	0	0	0	313
Shag (AON)	c21	156	43	173	231	11+	26	0	42	0	0	474	1,177
Gannet (AON)	x	0	0	0	0	0	0	0	0	0	0	0	x
Eider (AON)	x	x	x	x	x	x	193	x	c41+	26	x	x	260+
Great B-b Gull (AOT)	0	34	8	11	10	1	3	1	8	5	0	x	81+
Lesser B-b Gull (AON)	x	x	0	171	x	8	x	15	223	c28	0	x	445+
Herring Gull (AON)	x	x	61	937	x	c31	x	22	398	c331	0	x	1,780+
Kitiwake (AON)	c289+	420+	67	380	367	0	39	0	0	0	0	3,507	5,069
Common Tern (AON)	0	0	0	0	0	0	0	0	0	0	x	29	29
Arctic Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	832	832
Roseate Tern (AON)													0
Sandwich Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	4	4
Razorbill (AOS)	c98	167	66	165	103	0	15	0	1	0	0	3,899 pairs	4514
Guillemot (birds on cliffs)	c2450	c2205	c2900	c700	175	0	0	0	0	0	0	16,468 pairs	24,898
Puffin (birds unless otherwise stated)	0	c200 b on sca	c60 b on land	c500 b land/sca	527 b on sca	0	27 AOB	0	14 b on sca	0	0	39,200 AOB	39,200 AOB



Hedderwick

Auchtermuchty Common

Aberlady

Foxlake